Author Index to Volume 15

References with L are Letters to the Editor

Ablekov, V. K. Experimental Investigation of Stimulated Emissions from a Gas Mixture — 513.

Abrikosov, A. A. and L. P. Gor'kov. Spin-Orbit Interaction and the Knight Shift in Superconductors — 752.

Adamov, V. M., S. S. Kovalenko, and K. A. Petrzhak. Kinetic Energy of Fragments Emitted in the Fission of U^{238} Bombarded by 14.5-Mev Neutrons — 1024.

Ainutdinov, M. S., S. M. Zombkovskiĭ, S. Ya. Nikitin, and Ya. M. Selektor. Elastic Scattering of 7.2-BeV Negative Pions on Protons — 1038.

—, S. M. Zombkovskiĭ, S. Ya. Nikitin, Ya. M. Selektor, and A. F. Grashin. The $\pi\pi$ Interaction in π^-p Collisions at 7.2 BeV — 979L.

Akhiezer, A. I., V. F. Aleksin, V. G. Bar'yakhtar, and S. V. Peletminskiĭ. Effect of Radiation on Electron Relaxation and Plasma Electrical Conductivity in a Strong Magnetic Field — 386.

Akhiezer, I. A. Growth of Fluctuations in a Plasma with an Unstable Distribution Function — 406.

Aksenov, S. I. Nmr Line Structure of Cu^{63} and Cu^{65} Isotopes in β-Brass — 1165L.

Alekseevskiĭ, N. E. and Yu. P. Gaĭdukov. Fermi Surface of Silver — 49.

Aleksin, V. F. (see Akhiezer, A. I.) — 386.

Alfimenkov, V. P., Yu. M. Ostanevich, T. Ruskov, A. V. Strelkov, F. L. Shapiro, and Yen Wu-Kuang. Energy Spectrum of Resonance Absorption in Zinc Oxide of the 92-keV γ Radiation from Zn^{67} — 713.

—, Yu. M. Ostanevich, T. Ruskov, A. V. Strelkov, F. L. Shapiro, and Yen Wu-Kuang. Observation of the Mössbauer Effect in $Sm_2^{149}O_3$ — 718.

Alikhanov, A. I., A. I. Babaev, M. Ya. Balats, V. S. Kaftanov, L. G. Landsberg, V. A. Lyubimov, and Yu. V. Obukhov. Further Search for the $\mu \rightarrow e + \gamma$ Decay — 438L.

Alikhanyan, A. I., T. L. Asatiani, É. M. Matevosyan, and R. O. Sharkhatunyan. Investigation of the Polarization of Cosmic-Ray μ^+ Mesons — 90.

Almazova, S. P. (see Perelygin, V. P.) — 1022.

Al'tshuler, L. V., A. A. Bakanova, and R. F. Trunin. Shock Adiabats and Zero Isotherms of Seven Metals at High Pressures — 65.

Alyamovskiĭ, V. N. Electric Microfield Distribution in an Ionized Gas — 1067.

Aminov, L. K. On the Theory of Spin-Lattice Relaxation in Paramagnetic Ionic Crystals — 547.

— and B. I. Kochelaev. Spin-Spin Interaction via a Phonon Field in Paramagnetic Crystals — 903.

Andreev, S. I. and M. P. Vanyukov. Remarks on the Paper by Demidov, Skachkov, and Fanchenko entitled "Channel Expansion in Intense Small Sparks" — 214L.

Andreev, V. N. Fine Structure of Nuclear Masses Occurring in α Decay — 630L.

Anikina, M. Kh., D. V. Neagu, É. O. Okonov, N. I. Petrov, A. M. Rozanova, and V. A. Rusakov. An Experimental Investigation of Some Consequences of CP-Invariance in K_2^0-Meson Decays — 93.

Anisovich, V. V., A. A. Ansel'm, and V. N. Gribov. Contribution to the Theory of the $\pi + N \rightarrow N + \pi + \pi$ and $\gamma + N \rightarrow N + \pi + \pi$ Reactions Near Threshold — 159.

Ansel'm, A. A. (see Anisovich, V. V.) — 159.

Antuf'ev, Yu. P., A. K. Val'ter, A. N. L'vov, E. G. Kopanets, and S. P. Tsytko. Resonances of the $Si^{29}(p, \gamma)P^{30}$ Reaction — 268.

Arbuzov, B. A., E. N. Kladnitskaya, V. N. Penev, and R. N. Faustov. Elastic Scattering of Λ Hyperons and K_1^0 Mesons on Hydrogen — 676.

Arutyunyan, V. M. Photoproduction of π^0 Mesons at High Energies — 768.

Asatiani, T. L. (see Alikhanyan, A. I.) — 90.

Askar'yan, G. A. Cerenkov Radiation and Transition Radiation from Electromagnetic Waves — 943.

— Effects of the Gradient of a Strong Electromagnetic Beam on Electrons and Atoms — 1088.

— Interaction Between Laser Radiation and Oscillating Surfaces — 1161L.

Asribekov, V. E. Choice of Invariant Variables for the "Many-Point" Functions — 394.

Ausländer, J. (see Hulubei, H.) — 210L.

Avakyan, V. V. (see Khrimyan, A. V.) — 465.

Azbel', M. Ya. and G. A. Begiashvili. Width of Cyclotron Resonance Line in Semimetals and Determination of the Correlation Function for Bismuth — 445L.

— and R. N. Gurzhi. Electrical Conductivity of Thin Samples and the Possibility of Determining the Mean Free Path of Electrons in Metals — 1133.

Azimov, S. A., Do In Seb, L. F. Kirillova, É. M. Khabibullina, É. N. Tsyganov, M. G. Shafranova, B. A. Shakhbazyan, and A. A. Yuldashev. Proton-Proton Elastic Scattering at 2.8 BeV — 299.

Babaev, A. I., M. Ya. Balats, V. S. Kaftanov, L. G. Landsberg, V. A. Lyubimov, and Yu. V. Obukhov. A Search for the $\mu^+ \rightarrow e^+ + e^+ + e^-$ Decay — 1170L.

— (see Alikhanov, A. I.) — 438L.

Babikov, V. V. Gamma Radiation from a Compound Nucleus with Large Angular Momentum — 1143.

— Time for Formation of the Compound Nucleus and Gamma Radiation from Interacting Nuclei — 861.

Babushkin, F. A. Finite Nuclear Size Corrections to the Isotope Shift — 1113.

Bakanova, A. A. (see Al'tshuler, L. V.) — 65.

Balashov, V. V. Relation Between the Collective and Shell Descriptions of Dipole Excitations of Atomic Nuclei — 191.

—, V. B. Belyaev, and B. N. Zakhar'ev. Dipole Excitations on the Superfluid Model — 947.

Balats, M. Ya. (see Alikhanov, A. I.) — 438L.

— (see Babaev, A. I.) — 1170L.

Baldin, A. M. and Nguen Wan Hieu. Concerning One Possibility of Determining the Magnetic Moments of Unstable Vector Particles — 624L.

Barantsev, R. G. Asymptotic Smoothing out of a Discontinuity in a Monatomic Gas — 615.

Barashenkov, V. S., D. I. Blokhintsev, Wang Jung, É. Mikhul, Huang Tsu-chan, and Hu Shih-k'e. Inelastic Pion-Nucleon Interactions at High Energies — 154.

Barbashov, B. M. and G. V. Efimov. Properties of the Solution of the Low Equation for a Model of a Local Field Theory — 365.
Bar'yakhtar, V. G. (see Akhiezer, A. I.) — 386.
Baskova, K. A., S. S. Vasil'ev, No Seng Ch'ang, and L. Ya. Shavtvalov. Investigation of Some Radioactive Nuclei in the Region of the Filled $1f_{7/2}$ Shell — 289.
Basov, N. G. and A. N. Oraevskiĭ. Emission from Molecules in a Mixed Energy State — 1062.
Batrakov, G. F., O. R. Mis'kevich, and É. Troĭnar. Concerning the Measurement of the Surface Tension Between Superconducting and Normal Phases — 810.
Baz', A. I., L. D. Puzikov, and Ya. A. Smorodinskiĭ. Reconstruction of the Scattering Matrix near Threshold — 865.
Bednyakov, A. A., A. N. Boyarkina, I. A. Savenko, and A. F. Tulinov. Investigation of Multiple Scattering of 100—200 keV Protons on Carbon — 515.
Begiashvili, G. A. (see Azbel', M. Ya.) — 445L.
Belov, K. P. and S. A. Nikitin. Effects of Helicoidal Magnetic Structure on the Magnetostriction of Dysprosium — 279.
— and A. V. Ped'ko. 'Helical' Antiferromagnetism of Gadolinium — 62.
Belyaev, S. T. and V. G. Zelevinskiĭ. "Anharmonic" Effects of Quadrupole Oscillations of Spherical Nuclei — 1104.
Belyaev, V. B. (see Balashov, V. V.) — 947.
Berezinskiĭ, V. S. Polarization of High-Energy Cosmic-Ray Muons — 340.
Berezinskiĭ, V. and B. Dolgoshein. Calculation of the Polarization of Low-Energy Cosmic-Ray Muons — 749.
Berinde, A. (see Hulubei, H.) — 993.
Berlovich, É. E., Yu. K. Gusev, V. V. Il'in, V. V. Nikitin, and M. K. Nikitin. The Contribution of Collective Motion to the Lifting of l-Forbiddenness — 667.
Bezuglyĭ, P. A., A. A. Galkin, A. I. Pushkin, and A. I. Khomchenko. Magneto-Acoustic Resonance in Aluminum — 60.
Birbrair, B. L. The Inclusion of Neutron-Proton Interaction in the Pair Correlation Model — 336.
Blinov, M. V. and V. P. Éĭsmont. Nuclear Shells and Prompt Fission Neutrons — 129.
—, N. M. Kazarinov, and A. N. Protopopov. A Study of the Energy and Angular Distributions of Neutrons Emitted in the Fission of U^{235} Induced by Thermal Neutrons — 704.
Blokhintsev, D. I. Elastic Scattering of High-Energy Pions and Nucleons — 610.
— (see Barashenkov, V. S.) — 154.
Blokhintsev, L. D., É. I. Dolinskiĭ, and V. S. Popov. Analytic Properties of Nonrelativistic Graphs — 1136.
Blokhintseva, T. D., V. G. Grebinnik, V. A. Zhukov, G. Libman, L. L. Nemenov, G. I. Selivanov, and Yuan Jung-fang. Measurement of Total Cross Sections of $(\pi^- p)$ Reactions at π^- Meson Energy of 340 MeV — 629L.
Bogdankevich, O. V., B. I. Goryachev, and V. A. Zapevalov. Splitting of the Giant Resonance in Medium-Heavy Nuclei — 1044.
Bokov, V. A., I. E. Myl'nikova, and G. A. Smolenskiĭ. Ferroelectric Antiferromagnets — 447L.
Bondarenko, I. I. (see Kuz'minov, B. D.) — 75.
Boos, É. G., V. A. Botvin, N. P. Pavlova, Zh. S. Takibaev, and I. Ya. Chasnikov. Analysis of 9 BeV Proton-Nucleon Interactions in Nuclear Emulsion — 1.
Botvin, V. A. (see Boos, É. G.) — 1.
Boyarkina, A. N. (see Bednyakov, A. A.) — 515.
Braun, M. A. Analytic Properties of the Bound State Wave Function for a Superposition of Yukawa Potentials — 764.
Brazhnik, M. I. (see Krupnikov, K. K.) — 470.
Bryukhanov, V. A., N. N. Delyagin, and V. S. Shpinel'. Magnetic Moment of the 23.8-keV Excited State of Sn^{119} — 818.
—, V. I. Gol'danskiĭ, N. N. Delyagin, E. F. Makarov, and V. S. Shpinel'. Observation of the Mössbauer Effect in a Tin-Containing Polymer — 443L.
Budagov, Yu. A., P. F. Ermolov, E. A. Kushnirenko, and V. I. Moskalev. Interaction Between 153-MeV Negative Pions and Helium — 824.
Buishvili, L. L. and N. P. Giorgadze. Spin-Lattice Relaxation of Nuclei During Nuclear Resonance in Ferromagnetic Substances — 350.
Bulatov, A. S. (see Kogan, V. S.) — 1041.
Buryak, E. M. (see Karchevskiĭ, A. I.) — 260.
Cerenkov, P. A. (see Gorbunov, A. N.) — 520.
Chasnikov, I. Ya. (see Boos, É. G.) — 1.
Chechernikov, V. I. Antiferromagnetism of Iron-Nickel Alloys — 659.
Ch'en Ts'ung-mo (see Solov'ev, L. D.) — 369.
Chernavskiĭ, D. S. (see Roĭzen, I. I.) — 435.
Chernets, A. N. (see Ganapol'skiĭ, E. M.) — 8.
Chernikov, N. A. (see Logunov, A. A.) — 891.
Cheshkov, A. A. and Yu. M. Shirokov. Invariant Parametrization of the Relativistic Scattering Matrix — 103.
Chikin, A. I. Measurement of Maser Line Width — 451.
Ch'ing Ch'eng-jui and L. S. Novikov. Deviations of the P^{32} Spectrum from the Allowed Shape — 252.
Chizhov, V. P. (see Volkov, Yu. M.) — 42.
Ch'u Liang-yuan (see Liu Yüan) — 845.
Chuburkov, Yu. T. (see Perelygin, V. P.) — 1022.
Chudakov, A. E. (see Zatsepin, V. I.) — 1126.
Chultém, D. (see Ignatenko, A. E.) — 449L.
Chuvilo, I. V. (see Ozhdyani, L.) — 272.
Damburg, R. Ya. and E. M. Iolin. Calculation of the Diamagnetic Susceptibility of Helium — 572.
Delyagin, N. N. (see Bryukhanov, V. A.) — 443L.
— (see Bryukhanov, V. A.) — 818.
Demidov, B. A., Yu. F. Skachkov, and S. D. Fanchenko. On the Remarks of S. I. Andreev and M. P. Vanyukov Concerning the Paper "Expansion of the Channel in Intense Miniature Sparks" — 989L.
Demidov, V. S., V. G. Kirillov-Ugryumov, A. K. Ponosov, V. P. Protasov, and F. M. Sergeev. Elastic Scattering of 5—15 MeV π^- Mesons on Carbon — 1172L.
Demirkhanov, R. A., N. I. Leont'ev, I. A. Kosyĭ, and T. M. Filatova. Plasma Instability in a Toroidal Discharge Excited by a Traveling Electromagnetic Wave — 231.
Denisov, S. P. (see Govorkov, B. B.) — 699.
Devyatkova, E. D., M. I. Korngel'd, and I. A. Smirnov. Phonon Scattering on Impurity Ions in Sodium-Chloride Crystals — 212L.

Dmitriev, I. S., V. S. Nikolaev, L. N. Fateeva, and Ya. A. Teplova. Experimental Study of Electron Loss by Multiply Charged Ions in Gases — 11.
— (see Teplov, I. B.) — 243.
— (see Teplova, Ya. A.) — 31.
Dmitriev, N. A. The Equation of State of a Crystal at Zero Temperature — 539.
Do In Seb (see Azimov, S. A.) — 299.
Dolgoshein, B., B. Luchkov, and V. Ushakov. Polarization of Low-Energy Cosmic Ray Muons at Sea Level — 654.
— (see Berezinskiĭ, V.) — 749.
Dolinskiĭ, É. I. (see Blokhintsev, L. D.) — 1136.
Domokos, G. High-Energy Behavior of the Elastic Pion-Pion Scattering Amplitude — 377.
— (see Wolf, J.) — 605.
Dragnev, T. N. and B. P. Konstantinov. Energy and Angular Distributions of Protons from the Reaction $Ca^{40}(\gamma, p)K^{39}$ at $E_{\gamma max} = 22$ MeV — 236.
Druin, V. A. (see Polikanov, S. M.) — 1016.
Dubrovina, V. A. (see Gorbunov, A. N.) — 520.
Dunaĭtsev, A. F., V. I. Petrukhin, Yu. D. Prokoshkin, and V. I. Rykalin. Experimental Estimate of Probability of β Decay of the π^+ Meson — 439L.
—, V. I. Petrukhin, Yu. D. Prokoshkin, and V. I. Rykalin. Probability of the $\pi^+ \to \pi^0 + e^+ + \nu$ and $\pi^+ \to \gamma + e^+ + \nu$ Decay — 985L.
—, V. I. Petrukhin, Yu. D. Prokoshkin, and V. I. Rykalin. Observation of Charge Exchange of Stopped π^- Mesons on Nuclei of Bound Hydrogen — 1167L.
Dyatlov, I. T. (see Gribov, V. N.) — 140.
— (see Gribov, V. N.) — 879.
Dzhelepov, V. P., P. F. Ermolov, E. A. Kushnirenko, V. I. Moskalev, and S. S. Gershteĭn. Experimental Investigation of μ^- Mesic Atom Processes in Gaseous Hydrogen — 306.
Dzhibuti, R. I. (see Kopaleĭshvili, T. I.) — 327.
Dzyaloshinskiĭ, I. E. A Diagram Technique for Evaluating Transport Coefficients in Statistical Physics at Finite Temperatures — 778.
Efimov, G. V. The Kemmer Scalar Symmetric Model — 1082.
— (see Barbashov, B. M.) — 365.
Efremov, A. V. and D. V. Shirkov. Higher Partial Waves in Low-Energy Scattering — 932.
Egiyan, K. Sh. (see Khrimyan, A. V.) — 465.
Élsmont, V. P. Symmetry of Nuclear Fission — 127.
— (see Blinov, M. V.) — 129.
Eleonskiĭ, V. M., P. S. Zyryanov, and V. P. Silin. Collision Integral for Charged Particles in a Magnetic Field — 619.
Éliashberg, G. M. A Microscopic Theory of the Damping of Zero Sound in a Fermi Liquid — 1151.
Emel'yanov, A. A. On the Interpretation of the Two-Center Model Within the Framework of the Hydrodynamic Theory — 121.
Épshteĭn, É. M. Scattering of High Energy Electrons on Electrons and the Dipole Structure of the Electron — 762.
Ermolov, P. F. (see Budagov, Yu. A.) — 824.
— (see Dzhelepov, V. P.) — 306.
Ershov, A. G. Determination of the Amplitudes of Betatron and Synchrotron Oscillations of Electrons by High-Speed Motion Picture Photography — 422.
Esel'son, B. N., V. G. Ivantsov, and A. D. Shvets. λ-Points of Concentrated $He^3 - He^4$ Mixtures — 651.
Éstulin, I. V. (see Kalinkin, L. F.) — 794.
— (see Petushkov, A. A.) — 806.
Faĭn, V. M. Quantum Theory of Relaxation Processes — 743.
— (see Ginzburg, V. L.) — 131.
Fanchenko, S. D. (see Demidov, B. A.) — 989L.
Fateeva, L. N. (see Dmitriev, I. S.) — 11.
— (see Teplova, Ya. A.) — 31.
Faustov, R. N. (see Arbuzov, B. A.) — 676.
Fedorenko, N. V. (see Solov'ev, E. S.) — 459.
Fedyanin, V. K. The Proton Compton Effect in the Dipole Approximation — 720.
Filatova, T. M. (see Demirkhanov, R. A.) — 231.
Firsov, O. B. Kinetics of Exothermic Reactions Between Molecules and Molecular Ions — 906.
Fiveĭskiĭ, Yu. D. On Deceleration of Antiprotons in Matter — 558.
Flaks, I. P. (see Ogurtsov, G. N.) — 502.
Flerov, G. N. (see Volkov, V. V.) — 442L.
Fock, V. A. Criticism of an Attempt to Disprove the Uncertainty Relation Between Time and Energy — 784.
Fogel', Ya. M. (see Pilipenko, D. V.) — 646.
Fomichev, V. A. (see Polikanov, S. M.) — 1016.
Fradkin, É. E. Isotope Shift of Spectral Lines and the Compressibility of Deformed Nuclei — 550.
Frank-Kamenetskiĭ, D. A. Kinetics of Neutronization at Ultra-High Density — 607.
Franz, I. (see Hulubei, H.) — 993.
Friedländer, E. (see Hulubei, H.) — 210L.
Funtikov, A. I. (see Kormer, S. B.) — 477.
Gabovich, M. D. and G. S. Kirichenko. Excitation of Oscillations by Passage of a Slow Ion Beam Through a Plasma — 1026.
Gachok, V. P. Clothed Operators and the Commutativity Condition — 849.
Gaĭdukov, Yu. P. (see Alekseevskiĭ, N. E.) — 49.
Galitskiĭ, V. M. (see Vaks, V. G.) — 914.
Galkin, A. A. (see Bezuglyĭ, P. A.) — 60.
Ganapol'skiĭ, E. M. and A. N. Chernets. Excitation of Hypersound in Quartz — 8.
Gangrskiĭ, Yu. P. and I. Kh. Lemberg. Coulomb Excitation of Second 2^+ Levels in Even-Even Medium Weight Nuclei — 711.
Gantmakher, V. F. A Method of Measuring the Momentum of Electrons in a Metal — 982L.
Garif'yanov, N. S., B. M. Kozyrev, R. Kh. Timerov, and N. F. Usacheva. Electron Paramagnetic Resonance in Dilute Vanadyl Chloride Solutions — 791.
Gershteĭn, S. S. (see Dzhelepov, V. P.) — 306.
Gershuni, G. Z. and E. M. Zhukhovitskiĭ. Convective Instability Spectrum of a Conducting Medium in a Magnetic Field — 775.
Gertsenshteĭn, M. E. (see Pustovoĭt, V. I.) — 116.
Ginzburg, V. L. Magnetic Flux Quantization in a Superconducting Cylinder — 207.
— and V. M. Faĭn. On the Magnetic Properties of Paramagnetic 'Fluids' of the Molecular Chain Type — 131.
Giorgadze, N. P. (see Buishvili, L. L.) — 350.
Gofman, Yu. V. and O. F. Nemets. Elastic Scattering of Deuterons. III. — 457.

— and O. F. Nemets. Inelastic Scattering of Deuterons on Silicon, Titanium, and Iron Nuclei — 701.
—, O. F. Nemets, and Yu. S. Stryuk. Inelastic Scattering of 13.6-MeV Deuterons on Nickel Isotopes — 454.
Gol'danskiĭ, V. I. (see Bryukhanov, V. A.) — 443L.
Gol'dberg, Z. A. Finite Amplitude Waves in Magnetohydrodynamics — 179.
Golovanov, L. B. (see Vovenko, A. S.) — 498.
Gorbunov, A. N., V. A. Dubrovina, V. A. Osipova, V. S. Silaeva, and P. A. Cerenkov. Investigation of the Photoeffect in Light Nuclei — 520.
Gordeev, I. V. Resonance Theory of Nuclear Reactions Induced by Neutrons with Energies Below 5 MeV — 736.
Gor'kov, L. P. and L. P. Pitaevskiĭ. The Transition of Liquid He^3 Into the Superfluid State — 417.
— (see Abrikosov, A. A.) — 752.
Goryachev, B. I. (see Bogdankevich, O. V.) — 1044.
Govorkov, B. B., S. P. Denisov, and E. V. Minarik. Elastic Photoproduction of π^0 Mesons on Carbon at 155 MeV — 699.
Govorov, A. M., Li Ka Yeng, G. M. Osetinskiĭ, V. I. Salatskiĭ, and I. V. Sizov. Total Cross Section of the T + T Reaction in the 60 — 1140 keV Energy Range — 266.
Grashin, A. F. and V. N. Mel'nikov. The Effect of the $\pi\pi$ Interaction on the Electromagnetic Form Factor of the Nucleon — 973.
— and Ya. Ya. Shalamov. Spin of the ρ Meson — 787L.
— (see Ainutdinov, M. S.) — 979L.
— (see Kuznetsov, E. V.) — 1163L.
— (see Shalamov, Ya. Ya.) — 770.
Graudynya, L. Ya., O. I. Kostochkin, K. A. Petrzhak, and A. V. Sorokina. Gamma Rays from Inelastic Scattering of 2.95-MeV Neutrons on Ta^{181} — 240.
Grebinnik, V. G. (see Blokhintseva, T. D.) — 629L.
Gribov, V. N. Analytic Properties of the Partial Wave Amplitudes and the Asymptotic Behavior of the Scattering Amplitude — 873.
— and I. T. Dyatlov. Analytic Continuation of the Three-Particle Unitary Condition. Simplest Diagrams — 140.
— and I. T. Dyatlov. Contribution of Three-Particle States to the Equation for the Spectral Functions — 879.
— and I. Ya. Pomeranchuk. Complex Angular Momenta and the Relation between the Cross Sections of Various Processes at High Energies — 788L.
— and I. Ya. Pomeranchuk. Spin Structure of the Meson-Nucleon and Nucleon-Nucleon Scattering Amplitudes at High Energies — 1168L.
—, B. L. Ioffe, I. Ya. Pomeranchuk, and A. P. Rudik. Some Consequences of the Moving-Pole Hypothesis for Processes at High Energies — 984L.
— (see Anisovich, V. V.) — 159.
Gritsyna, V. T. (see Remaev, V. V.) — 283.
Gurzhi, R. N. (see Azbel', M. Ya.) — 1133.
Gusev, Yu. K. (see Berlovich, É. E.) — 667.
Gvozdev, B. A. (see Perelygin, V. P.) — 1022.
Hu Shih-k'e (see Barashenkov, V. S.) — 154.
Huang Tsu-chan (see Barashenkov, V. S.) — 154.
Hulubei, H., J. Ausländer, E. Friedländer, and S. Titeica. Angular Distribution of Muons from the π-μ Decay — 210L.
—, I. Neamu, I. Franz, N. Martalogu, N. Scintei, M. Ivascu, and A. Berinde. Scattering of Low-Energy Protons by S^{32} — 993.
Ignatenko, A. E., M. G. Petrashku, and D. Chultém. Electronic Activation of Mesic Atoms — 449L.
Il'in, R. N. (see Solov'ev, E. S.) — 459.
Il'in, V. V. (see Berlovich, É. E.) — 667.
Imshennik, V. S. Shock Wave Structure in a Dense High-Temperature Plasma — 167.
Ioffe, B. L. Violation of the $\Delta Q = \Delta S$ Rule in Leptonic Decays of K Mesons and the High-Energy Behavior of Weak Interactions — 978L.
— (see Gribov, V. N.) — 984L.
Iolin, E. M. (see Damburg, R. Ya.) — 572.
Iosilevskiĭ, Ya. A. (see Kagan, Yu.) — 182.
Irkhin, Yu. P. and V. G. Shavrov. Theory of the Spontaneous Hall Effect in Ferromagnets — 854.
Itskevich, E. S. The Electrical Resistance of Cerium at Low Temperatures and High Pressures — 811.
Ivantsov, V. G. (see Esel'son, B. N.) — 651.
Ivascu, M. (see Hulubei, H.) — 993.
Izyumov, Yu. A. Scattering of Polarized Neutrons by a Helicoidal Magnetic Structure — 1162L.
Kaftanov, V. S. (see Alikhanov, A. I.) — 438L.
— (see Babaev, A. I.) — 1170L.
Kagan, Yu. Inelastic Scattering of Slow Neutrons in Arbitrary Crystals and the General Problem of Reconstructing the Phonon Spectrum — 954.
— and Ya. A. Iosilevskiĭ. The Mössbauer Effect for an Impurity Nucleus in a Crystal. I. — 182.
— (see Zhdanov, V.) — 596.
Kalinkin, L. F., A. S. Melioranskiĭ, and I. V. Éstulin. Gamma-Ray Cascades in the $Rh^{103}(n,\gamma)Rh^{104}$ Reaction — 794.
Kaner, É. A. and V. M. Yakovenko. On the Theory of Transition Radiation — 330.
Kapitza, S. P. and L. A. Vaĭnshteĭn. Radiation from Electron Bunches in a Microtron — 573.
Karchevskiĭ, A. I. and E. M. Buryak. Magnetic Properties of the β-Modification of Uranium Hydride and Deuteride — 260.
Karnaukhov, V. A. Anomalous α Emitters in the Po — Ra Region — 671.
— (see Polikanov, S. M.) — 1016.
Kazarinov, N. M. (see Blinov, M. V.) — 704.
Kazarinov, R. F. and V. G. Skobov. On the Possibility of Amplification of Ultrasound in Semiconductors in an Electric Field — 628L.
— and V. G. Skobov. Theory of Nonlinear Galvanomagnetic Phenomena in Semiconductors — 726.
Kazarnovskiĭ, M. V. and A. V. Stepanov. Theory of Resonance Scattering by Atomic Systems. I. Derivation of General Formulas — 343.
Khabibullina, É. M. (see Azimov, S. A.) — 299.
Khachaturyan, M. N. (see Ozhdyani, L.) — 272.
— (see Pantuev, V. S.) — 626L.
Khaĭkin, M. S. Investigation of the Fermi Surface in Tin by the Method of Cyclotron Resonance — 18.
— and R. T. Mina. Investigation of the Fermi Surface in Lead by the Method of Cyclotron Resonance — 24.
Khomchenko, A. I. (see Bezuglyĭ, P. A.) — 60.
Khomskiĭ, D. I. (see Nemenov, L. L.) — 889.
Khotkevich, V. I. (see Kogan, V. S.) — 632L.

Khrenov, B. A. (see Vernov, S. N.) — 528.
Khrimyan, A. V., V. V. Avakyan, N. A. Nalbandyan, K. Sh. Egiyan, and M. P. Pleshko. Composition of Nuclear-Active Particles with Momentum > 1.8 BeV/c in Cosmic Radiation at 3250 m Above Sea Level. I. — 465.
Khristiansen, G. B. (see Vernov, S. N.) — 528.
Khrustalev, O. A. (see Okonov, É. O.) — 537.
Khutsishvili, G. R. Spin Diffusion and Magnetic Relaxation of Nuclei — 909.
Kirichenko, G. S. (see Gabovich, M. D.) — 1026.
Kirillov-Ugryumov, V. G. (see Demidov, V. S.) — 1172L.
Kirillova, L. F. (see Azimov, S. A.) — 299.
Kladnitskaya, E. N. (see Arbuzov, B. A.) — 676.
Klimontovich, Yu. L. and V. P. Silin. Theory of Fluctuations of the Particle Distributions in a Plasma — 199.
Klyarfel'd, B. N. (see Pokrovskaya-Soboleva, A. S.) — 297.
Klyucharev, A. P. (see Remaev, V. V.) — 283.
Kobzarev, I. Yu. and L. B. Okun'. Unitary Symmetry and the Universal Weak Interaction — 970.
— and L. B. Okun'. New Particles and the Sakata Model — 1146.
Kochelaev, B. I. (see Aminov, L. K.) — 903.
Kogan, Sh. M. (see Lifshitz, T. M.) — 661.
Kogan, V. S. and A. S. Bulatov. The Temperature Dependence of the Isotope Effect in the Nickel Lattice — 1041.
— and V. I. Khotkevich. Temperature Dependence of the Effect of Isotopic Composition on the Size of the Lattice Constant in Lithium — 632L.
Kolesnikov, V. N. and V. V. Obukhov-Denisov. The Effective Cross Section for Elastic Scattering of Slow Electrons by Hydrogen Atoms — 692.
Kolesnikova, A. N. (see Kormer, S. B.) — 477.
Konstantinov, B. P. (see Dragnev, T. N.) — 236.
Kopaleishvili, T. I. and R. I. Dzhibuti. Investigation of the $He^4(\gamma, np)D^2$ Photonuclear Reaction — 327.
Kopanets, E. G. (see Antuf'ev Yu. P.) — 268.
Kopvillem, U. Kh. Pulsed Excitation of a System of Weakly Interacting Particles — 924.
Kormer, S. B., A. I. Funtikov, V. D. Urlin, and A. N. Kolesnikova. Dynamic Compression of Porous Metals and the Equation of State with Variable Specific Heat at High Temperatures — 477.
Kornfel'd, M. I. (see Devyatkova, E. D.) — 212L.
Kornienko, L. S., P. P. Pashinin, and A. M. Prokhorov. The Spin-Lattice Relaxation Time of the Ti^{3+} Ion in Corundum — 45.
Kosevich, A. M. Deformation Field in an Isotropic Elastic Medium Containing Moving Dislocations — 108.
Kostochkin, O. I. (see Graudynya, L. Ya.) — 240.
Kosyi, I. A. (see Demirkhanov, R. A.) — 231.
Kotenko, L. P., E. P. Kuznetsov, G. I. Merzon, and Yu. B. Sharov. Elastic Scattering of 2.8-BeV/c π^- Mesons on Hydrogen — 800.
Kovalenko, S. S. (see Adamov, V. M.) — 1024.
Kovalev, V. P. (see Stavinskiĭ, V. S.) — 1120.
Kozyrev, B. M. (see Garif'yanov, N. S.) — 791.
Krinchik, G. S. and R. D. Nuralieva. Magnetooptical Resonance in Orderable Alloys and the Internal Crystal Field of a Ferromagnetic Metal — 999.
Krupnikov, K. K., M. I. Brazhnik, and V. P. Krupnikova. Shock Compression of Porous Tungsten — 470.
Krupnikova, V. P. (see Krupnikov, K. K.) — 470.
Kuang Wey-yen. An Investigation of the Temperature Discontinuity at the Boundary Between a Solid and Superfluid Helium — 635.
Kudinov, E. K. and S. T. Pavlov. Single-Particle Excitations in a Non-Degenerate Gas — 585.
Kulakov, B. A. (see Vovenko, A. S.) — 498.
Kul'chitskiĭ, L. A. (see Volkov, Yu. M.) — 77.
Kulik, I. O. Some Features of Collective Energy Losses of Fast Electrons Moving in an Anisotropic Plasma — 380.
Kulikov, A. V. (see Volkov, Yu. M.) — 42.
Kulikov, O. F. and P. B. Shoshin. An Experimental Investigation of Electron Bunch Size During a Special Mode of Synchrotron Operation — 1013.
Kushnirenko, E. A. (see Budagov, Yu. A.) — 824.
— (see Dzhelepov, V. P.) — 306.
Kutsaeva, L. S. (see Kuz'minov, B. D.) — 75.
Kuz'minov, B. D., L. S. Kutsaeva, and I. I. Bondarenko. Anisotropy and Energy Distribution of Th^{232} Fission Fragments — 75.
Kuznetsov, E. P. (see Kotenko, L. P.) — 800.
— (see Kuznetsov, E. V.) — 1163L.
Kuznetsov, E. V., E. P. Kuznetsov, Ya. Ya. Shalamov, and A. F. Grashin. Experimental Data on the Existence of a Resonance in the $K^0\Lambda^0$ System at an Energy of 1650 MeV — 1163L.
Kuznetsova, M. Ya., V. N. Pokrovskiĭ, and V. N. Rybakov. Investigation of the $Al^{27}(p, \pi^+)Mg^{27}$ Reaction — 1006.
Landsberg, L. G. (see Alikhanov, A. I.) — 438L.
— (see Babaev, A. I.) — 1170L.
Lange, F. K. A Method for Preparing the Superconducting Compound Nb_3Sn — 29.
Larkin, A. I. (see Vaks, V. G.) — 914.
Latysh, V. G. The Equilibrium Shape of Atomic Nuclei — 543.
Lemberg, I. Kh. (see Gangrskiĭ, Yu. P.) — 711.
Leont'ev, N. I. (see Demirkhanov, R. A.) — 231.
Levintov, I. I. Polarization and Charge Exchange in High-Energy πp Scattering — 137.
Li Don Hwa (see Vernov, S. N.) — 528.
Li Ka Yeng (see Govorov, A. M.) — 266.
Libman, G. (see Blokhintseva, T. D.) — 629L.
Lifshitz, I. M. Kinetics of Ordering During Second-Order Phase Transitions — 939.
Lifshitz, T. M., Sh. M. Kogan, A. N. Vystavkin, and P. G. Mel'nik. Some Phenomena Occurring in n-Type Indium Antimonide Exposed to High Frequency Radiation — 661.
Liu Yüan and Ch'u Liang-yuan. Motion of Individual Particles in Highly Deformed Nuclei — 845.
Lobashov, V. M. and V. A. Nazarenko. Investigation of the Dependence of the $\beta\gamma$ Correlation on the Electron Velocity in the β Decay of Co^{60} and Au^{198} — 247.
— and V. A. Nazarenko. β-γ Correlation in β Decays of Mn^{56} and F^{20} — 257.
Logunov, A. A., I. T. Todorov, and N. A. Chernikov. Generalization of Symanzik's Theorem on the Majorization of Feynman Graphs — 891.
Luchkov, B. (see Dolgoshein, B.) — 654.
L'vov, A. N. (see Antuf'ev, Yu. P.) — 268.

Lyagin, I. V. and I. S. Tsukerman. Photoproduction of Pairs of Charged Vector Mesons in the Coulomb Field of a Nucleus — 1123.
Lyubimov, A. L. (see Vovenko, A. S.) — 498.
Lyubimov, V. A. (see Alikhanov, A. I.) — 438L.
— (see Babaev, A. I.) — 1170L.
Lyuboshitz, V. L. and Ya. A. Smorodinskiĭ. Covariant Expansion of the Electromagnetic Field — 589.
Lyul'ka, V. A. Decay of Hypernuclei — 1131.
Majling, L. On a Possible Interpretation of Experiments on Inelastic Scattering of Fast Protons on Light Nuclei — 579.
Makarov, E. F. (see Bryukhanov, V. A.) — 443L.
Malkin, B. Z. On the Theory of Nonradiative Transitions in Luminescent Ionic Crystals — 977L.
Mandel'tsveĭg, V. B. Scattering of Neutrinos on Nucleons in the Model of the Anomalous Muon Interaction — 886.
Manenkov, A. A. and A. M. Prokhorov. Spin-Lattice Relaxation and Cross-Relaxation Interactions in Chromium Corundum — 54.
— and A. M. Prokhorov. Temperature Dependence of Spin-Lattice Relaxation Times — 951.
Markov, M. A. and Nguyen Wan Hieu. Neutral Baryon Currents and Single Production of Hyperons — 190.
Martalogu, N. (see Hulubei, H.) — 993.
Mashkevich, V. S. Electromagnetic Waves in a Medium Possessing a Continuous Energy Spectrum. III. — 97.
Matevosyan, É. M. (see Alikhanyan, A. I.) — 90.
Matthies, S., V. G. Neudachin, and Yu. F. Smirnov. Single-Particle Levels in O^{17} and F^{17} Nuclei Under the Assumption of Strong Coupling of Nucleon and Tetrahedrally Symmetric Core — 411.
Matulenko, Yu. A. (see Vovenko, A. S.) — 498.
Melekhin, V. N. Vertical Focusing in the Microtron — 433.
Melioranskiĭ, A. S. (see Kalinkin, L. F.) — 794.
Mel'nik, P. G. (see Lifshitz, T. M.) — 661.
Mel'nikov, V. N. (see Grashin, A. F.) — 973.
Merzon, G. I. (see Kotenko, L. P.) — 800.
Mikheev, V. L. (see Polikanov, S. M.) — 1016.
Mikhul, É. K. (see Barashenkov, V. S.) — 154.
Mina, R. T. (see Khaĭkin, M. S.) — 24.
Minarik, E. V. (see Govorkov, B. B.) — 699.
Mis'kevich, O. R. (see Batrakov, G. F.) — 810.
Moiseev, S. S. (see Zaslavskiĭ, G. M.) — 731.
Moskalev, V. I. (see Budagov, Yu. A.) — 824.
— (see Dzhelepov, V. P.) — 306.
Murakhver, Yu. E. Resonance Charge Exchange in Atomic Hydrogen — 859.
Myl'nikova, I. E. (see Bokov, V. A.) — 447L.
Nalbandyan, N. A. (see Khrimyan, A. V.) — 465.
Nazarenko, V. A. (see Lobashov, V. M.) — 247.
— (see Lobashov, V. M.) — 257.
Neagu, D. V., E. O. Okonov, N. I. Petrov, A. M. Rozanova, and V. A. Rusakov. Production of Hyperons in Lead by K_2^0 Mesons with a Mean Energy of ~100 MeV — 303.
— (see Anikina, M. Kh.) — 93.
Neamu, I. (see Hulubei, H.) — 993.
Nemenov, L. L., L. D. Solov'ev, and D. I. Khomskiĭ. The Role of the Bipion in Single Pion Production in Nucleon-Nucleon Collisions — 889.
— (see Blokhintseva, T. D.) — 629L.
Nemets, O. F. and V. V. Tokarevskiĭ. "Gross Structure" of Proton Spectra in Stripping Reactions — 1028.
— (see Gofman, Yu. V.) — 454.
— (see Gofman, Yu. V.) — 457.
— (see Gofman, Yu. V.) — 701.
Neudachin, V. G. (see Matthies, S.) — 411.
Nguyen Wan Hieu. Experimental Investigation of the Structure of the Vector Current in Weak Interactions — 1116.
— Angular Distribution of Decay Products of Intermediate Vector Mesons Produced in the Process $e^+ + e^- \rightarrow B^+ + B^-$ — 1118.
— (see Baldin, A. M.) — 624L.
— (see Markov, M. A.) — 190.
Nikanorov, V. I., G. Peter, A. F. Pisarev, and Kh. Poze. Measurement of the Spin Correlation Coefficient for pp Scattering at 660 MeV — 837.
Nikitin, M. K. (see Berlovich, É. E.) — 667.
Nikitin, S. A. (see Belov, K. P.) — 279.
Nikitin, S. Ya. (see Aĭnutdinov, M. S.) — 979L.
— (see Aĭnutdinov, M. S.) — 1038.
Nikitin, V. V. (see Berlovich, É. E.) — 667.
Nikolaev, V. S. (see Dmitriev, I. S.) — 11.
— (see Teplova, Ya. A.) — 31.
Nikol'skiĭ, B. A., L. V. Surkova, A. A. Varfolomeev, and M. M. Sulkovskaya. Search for the D^+ Meson — 631L.
No Seng-ch'ang (see Baskova, K. A.) — 289.
Novikov, L. S. (see Ch'ing Ch'eng-Jui) — 252.
Novikov, M. T. (see Pivovar, L. I.) — 1035.
Novikov, V. M. (see Zaretskiĭ, D. F.) — 358.
Nuralieva, R. D. (see Krinchik, G. S.) — 999.
Obukhov, Yu. V. (see Alikhanov, A. I.) — 438L.
— (see Babaev, A. I.) — 1170L.
Obukhov-Denisov, V. V. (see Kolesnikov, V. N.) — 692.
Ogurtsov, G. N. and I. P. Flaks. Charge Exchange of Xe^{3+} and Xe^{4+} in Neon — 502.
Okonov, É. O. Limits for the Possible Magnetic Moment of the K^0 Meson — 1079.
—, M. I. Podgoretskiĭ, and O. A. Khrustalev. Concerning the Gravitational Masses of K^0 and $\bar{K}^0$ Mesons — 537.
— (see Anikina, M. Kh.) — 93.
— (see Neagu, D. V.) — 303.
Okun', L. B. (see Kobzarev, I. Yu.) — 970.
— (see Kobzarev, I. Yu.) — 1146.
Oparin, V. A. (see Solov'ev, E. S.) — 459.
Oraevskiĭ, A. N. (see Basov, N. G.) — 1062.
Orlov, Yu. V. Direct Nuclear Photoeffect and the Optical Model of the Nucleus — 175.
Osetinskiĭ, G. M. (see Govorov, A. M.) — 266.
Osipova, V. A. (see Gorbunov, A. N.) — 520.
Ostanevich, Yu. M. (see Alfimenkov, V. P.) — 713.
— (see Alfimenkov, V. P.) — 718.
Ozhdyani, L., V. S. Pantuev, M. N. Khachaturyan, and I. V. Chuvilo. Total Cross Section for Interaction Between Protons and 8.3-BeV Neutrons — 272.
Panin, B. V. Interaction of Medium-Energy (10 — 100 keV) Atomic Particles with Solids (Energy Spectra of Secondary Ions) — 215.
Pantuev, V. S. and M. N. Khachaturyan. Cross Section for the Interaction Between Neutrons and Nuclei at 8.3 BeV — 626L.
— (see Ozhdyani, L.) — 272.

Pashinin, P. P. (see Kornienko, L. S.) — 45.
Patashinskiĭ, A. Z. Location of Singularities of Feynman Diagrams — 567.
Pavlov, S. T. (see Kudinov, E. K.) — 585.
Pavlova, N. P. (see Boos, É. G.) — 1.
Ped'ko, A. V. (see Belov, K. P.) — 62.
Peletminskiĭ, S. V. (see Akhiezer, A. I.) — 386.
Penev, V. N. (see Arbuzov, B. A.) — 676.
Perelygin, V. P., S. P. Almazova, B. A. Gvozdev, and Yu. T. Chuburkov. Spontaneous Fission with an Anomalously Short Period, II. — 1022.
Petelina, N. G. (see Zverev, G. M.) — 820.
Peter, G. (see Nikanorov, V. I.) — 837.
Petrashku, M. G. (see Ignatenko, A. E.) — 449L.
Petrov, N. I. (see Anikina, M. Kh.) — 93.
— (see Neagu, D. V.) — 303.
Petrukhin, V. I. (see Dunaĭtsev, A. F.) — 439L.
— (see Dunaĭtsev, A. F.) — 985L.
— (see Dunaĭtsev, A. F.) — 1167L.
Petushkov, A. A. and I. V. Éstulin. Nuclear Matrix Elements in Beta Decay of La^{140} — 806.
Petrzhak, K. A. (see Adamov, V. M.) — 1024.
— (see Graudynya, L. Ya.) — 240.
Pham Zuy Hien, V. G. Shapiro, and V. S. Shpinel'. Resonance Scattering of Gamma Quanta in Te^{125} — 489.
Pik-Pichak, G. A. Fission Barrier of a Rotating Nucleus — 897.
Pikus, G. E., N. S. Skvortsov, and V. G. Yur'ev. Measurement of Electron Mobility According to the Variation of Plasma Resistance in a Magnetic Field — 225.
Pilipenko, D. V. and Ya. M. Fogel'. Electron Capture and Loss by Fast Hydrogen Atoms Passing Through Molecular Gases — 646.
Pisarev, A. F. (see Nikanorov, V. I.) — 837.
Pitaevskiĭ, L. P. Electron Recombination in a Monatomic Gas — 919.
— (see Gor'kov, L. P.) — 417.
Pivovar, L. I., M. T. Novikov, and V. M. Tubaev. Electron Capture by Helium Ions in Various Gases in the 300 — 1500 keV Energy Range — 1035.
Pleshko, M. P. (see Khrimyan, A. V.) — 465.
Pleve, A. A. (see Polikanov, S. M.) — 1016.
Podgoretskiĭ, M. I. (see Okonov, É. O.) — 537.
Pokrovskaya-Soboleva, A. S. and B. N. Klyarfel'd. Application of Similitude Relations to Ignition of a Gas Discharge in Hydrogen — 297.
Pokrovskiĭ, V. N. (see Kuznetsova, M. Ya.) — 1006.
Polikanov, S. M., V. A. Druin, V. A. Karnaukhov, V. L. Mikheev, A. A. Pleve, N. K. Skobelev, V. G. Subbotin, G. M. Ter-Akop'yan, and V. A. Fomichev. Spontaneous Fission with an Anomalously Short Period. I. — 1016.
Pomeranchuk, I. Ya. (see Gribov, V. N.) — 788L.
— (see Gribov, V. N.) — 984L.
— (see Gribov, V. N.) — 1168L.
Pomorski, L. (see Volkov, V. V.) — 442L.
Ponosov, A. K. (see Demidov, V. S.) — 1172L.
Popov, V. S. (see Blokhintsev, L. D.) — 1136.
Popov, Yu. P. and F. L. Shapiro. Energy Dependence of Cross Sections for (n, γ) Reactions on a Number of Odd-Z Nuclei — 683.
Poze, Kh. (see Nikanorov, V. I.) — 837.
Privorotskiĭ, I. A. Anisotropy of Absorption of Ultrasound in Superconductors — 315.
Prokhorov, A. M. (see Kornienko, L. S.) — 45.
— (see Manenkov, A. A.) — 54.
— (see Manenkov, A. A.) — 951.
Prokoshkin, Yu. D. (see Dunaĭtsev, A. F.) — 439L.
— (see Dunaĭtsev, A. F.) — 985L.
— (see Dunaĭtsev, A. F.) — 1167.
Provotorov, B. N. A Quantum-Statistical Theory of Cross Relaxation — 611.
Protasov, V. P. (see Demidov, V. S.) — 1172L.
Protopopov, A. N. (see Blinov, M. V.) — 704.
Pushkin, A. I. (see Bezuglyĭ, P. A.) — 60.
Pustovoĭt, V. I. and M. E. Gertsenshteĭn. Gravitational Radiation by a Relativistic Particle — 116.
Puzikov, L. D. (see Baz', A. I.) — 865.
Remaev, V. V., V. T. Gritsyna, and A. P. Klyucharev. New Short-Lived Isomers Nd^{140m}, Pm^{141m}, Eu^{146m}, and Gd^{158m} — 283.
Rimskiĭ-Korsakov, A. A. and V. V. Smirnov. Angular Distribution of Photoelectrons Knocked Out by Cs^{137} Photons from Targets with Different Z — 47.
Roĭzen, I. I. and D. S. Chernavskiĭ. On the Interference Between the Amplitudes of Inelastic Processes — 435.
Romanovskiĭ, E. A. (see Vasil'ev, S. S.) — 274.
Rozanova, A. M. (see Anikina, M. Kh.) — 93.
— (see Neagu, D. V.) — 303.
Rudik, A. P. (see Gribov, V. N.) — 984L.
Rumer, Yu. B. Invariant Formulation of the Theory of the Gravitational Wave Field — 402.
Rumsh, M. A. and V. N. Shchemelev. Determination of Fluorescence Yield by Measuring the X-Ray Photoelectric Effect in a Massive Cathode — 507.
Rusakov, V. A. (see Aninkina, M. Kh.) — 93.
— (see Neagu, D. V.) — 303.
Ruskov, T. (see Alfimenkov, V. P.) — 713.
— (see Alfimenkov, V. P.) — 718.
Rybakov, V. N. (see Kuznetsova, M. Ya.) — 1006.
Rykalin, V. I. (see Dunaĭtsev, A. F.) — 439L.
— (see Dunaĭtsev, A. F.) — 985L.
— (see Dunaĭtsev, A. F.) — 1167L.
Salatskiĭ, V. I. (see Govorov, A. M.) — 266.
Sanikidze, D. G. Singularities in the Equilibrium Diagram of a $He^3 - He^4$ Solution at the λ Point — 922.
Sannikov, S. S. Inelastic Scattering of Photons in the Coulomb Field of a Nucleus — 196.
Savenko, I. A. (see Bednyakov, A. A.) — 515.
Savin, I. A. (see Vovenko, A. S.) — 498.
Sazykin, A. (see Zhdanov, V.) — 596.
Scintei, N. (see Hulubei, H.) — 993.
Sedov, V. L. Antiferromagnetism of Iron-Manganese Alloys — 88.
Selektor, Ya. M. (see Ainutdinov, M. S.) — 979L.
— (see Ainutdinov, M. S.) — 1038.
Selivanov, G. I. (see Blokhintseva, T. D.) — 629L.
Semenenko, E. E. and A. I. Sudovtsov. Some Features in the Temperature Dependence of the Electrical Resistance of Ferromagnetic Metals at Low Temperatures — 708.
—, A. I. Sudovtsov, and A. D. Shvets. Temperature Dependence of the Electrical Resistance of Iron in the Range 0.38 — 4.2°K — 1033.
Serebryakov, V. V. and D. V. Shirkov. Certain Resonance

Solutions of Low Energy Pion-Pion Scattering Equations — 425.
Sergeev, F. M. (see Demidov, V. S.) — 1172L.
Sevast'yanov, B. K. and V. A. Sokolina. Magnetic Moment of Superconducting Tin Films — 840.
Shafranova, M. G. (see Azimov, S. A.) — 299.
Shakhbazyan, B. A. (see Azimov, S. A.) — 299.
Shalamov, Ya. Ya. and A. F. Grashin. Data on the $\pi\pi$ Interaction Derived from Pion Production Reactions in πp Collisions — 770.
— (see Grashin, A. F.) — 787L.
— (see Kuznetsov, E. V.) — 1163L.
Shapiro, F. L. (see Alfimenkov, V. P.) — 713.
— (see Alfimenkov, V. P.) — 718.
— (see Popov, Yu. P.) — 683.
Shapiro, V. D. and V. I. Shevchenko. The Nonlinear Theory of Interaction Between Charged Particle Beams and a Plasma in a Magnetic Field — 1053.
Shapiro, V. G. (see Pham Zuy Hien) — 489.
Shardanov, A. Kh. and V. G. Shevchenko. Investigation of the $Li^7(\gamma, p)He^6$ Reaction — 996.
Sharkhatunyan, R. O. (see Alikhanyan, A. I.) — 90.
Sharov, Yu. B. (see Kotenko, L. P.) — 800.
Shavrov, V. G. (see Irkhin, Yu. P.) — 854.
Shavtvalov, L. Ya. (see Baskova, K. A.) — 289.
Shchemelev, V. N. (see Rumsh, M. A.) — 507.
Shestoperov, V. Ya. (see Tret'yakova, Ch. A.) — 735.
Shevchenko, O. P. (see Teplov, I. B.) — 243.
Shevchenko, V. G. and B. A. Yur'ev. Photoprotons from Rh, Pt, and Pb — 492.
— (see Shardanov, A. Kh.) — 996.
Shevchenko, V. I. (see Shapiro, V. D.) — 1053.
Shirkov, D. V. (see Efremov, A. V.) — 932.
— (see Serebryakov, V. V.) — 425.
Shirokov, M. I. Estimates of the Effective Interaction Radius of Particles — 123.
Shirokov, Yu. M. (see Cheshkov, A. A.) — 103.
Shitikova, K. V. Giant Resonance in Photodisintegration of the Zr^{90} Nucleus — 603.
Shoshin, P. B. (see Kulikov, O. F.) — 1013.
Shpinel', V. S. (see Bryukhanov, V. A.) — 443L.
— (see Bryukhanov, V. A.) — 818.
— (see Pham Zuy Hien) — 489.
Shvets, A. D. (see Esel'son, B. N.) — 651.
— (see Semenenko, E. E.) — 1033.
Silaeva, V. S. (see Gorbunov, A. N.) — 520.
Silin, V. P. (see Eleonskiĭ, V. M.) — 619.
— (see Klimontovich, Yu. L.) — 199.
Sizov, I. V. (see Govorov, A. M.) — 266.
Skachkov, Yu. F. (see Demidov, B. A.) — 989L.
Skobelev, N. K. (see Polikanov, S. M.) — 1016.
Skobov, V. G. (see Kazarinov, R. F.) — 828L.
— (see Kazarinov, R. F.) — 726.
Skvortsov, N. S. (see Pikus, G. E.) — 225.
Slavnov, D. A. Exclusion of Divergences from the Scattering Matrix — 1072.
Smirnov, A. I. (see Sumbaev, O. I.) — 82.
Smirnov, E. V. (see Vovenko, A. S.) — 498.
Smirnov, I. A. (see Devyatkova, E. D.) — 212L.
Smirnov, V. V. (see Rimskiĭ-Korsakov, A. A.) — 47.
Smirnov, Yu. F. (see Matthies, S.) — 411.
Smolenskiĭ, G. A. (see Bokov, V. A.) — 447L.
Smorodinskiĭ, Ya. A. (see Baz', A. I.) — 865.
— (see Lyuboshitz, V. L.) — 589.
Sokolina, V. A. (see Sevast'yanov, B. K.) — 840.
Solov'ev, E. S., R. N. Il'in, V. A. Oparin, and N. V. Fedorenko. Ionization of Gases by Fast Hydrogen Atoms and by Protons — 459.
Solov'ev, L. D. and Ch'en Ts'ung-mo. On a Phenomenological Description of the Pion-Pion Interaction — 369.
— (see Nemenov, L. L.) — 889.
Solov'ev, V. V. and I. S. Tsukerman. Production of Charged Vector Bosons (X Mesons) by Leptons in the Coulomb Field of Nuclei — 868.
Sorokina, A. V. (see Graudynya, L. Ya.) — 240.
Stavinskiĭ, V. S. and V. P. Kovalev. A Calculation of the Fission Threshold and Fragment Excitation Energies by Means of the Liquid Drop Model of the Nucleus with Inclusions of the Wigner Symmetry — 1120.
Stepanov, A. V. (see Kazarnovskiĭ, M. V.) — 343.
Strakhovskiĭ, G. M. and V. M. Taterenkov. Radiation of Molecules Under Resonant Conditions — 625L.
Strelkov, A. V. (see Alfimenkov, V. P.) — 713.
— (see Alfimenkov, V. P.) — 718.
Strutinskiĭ, V. M. Equilibrium Shapes of Nuclei in the Quasistatic Fission Model — 1091.
Stryuk, Yu. S. (see Gofman, Yu. V.) — 454.
Subbotin, V. G. (see Polikanov, S. M.) — 1016.
Sudovtsov, A. I. (see Semenenko, E. E.) — 708.
— (see Semenenko, E. E.) — 1033.
Sulkovskaya, M. M. (see Nikol'skiĭ, B. A.) — 631L.
Sumbaev, O. I., A. I. Smirnov, and V. S. Zykov. The Mössbauer Effect on Tungsten Isotopes — 82.
Suranyi, P. Behavior of the Real Part of the Scattering Amplitude at Very High Energies — 988L.
Surkova, L. V. (see Nikol'skiĭ, B. A.) — 631L.
Takibaev, Zh. S. (see Boos, É. G.) — 1.
Tatarenkov, V. M. (see Strakhovskiĭ, G. M.) — 625L.
Tatarskiĭ, V. I. Application of Quantum Field Theory Methods to the Problem of Degeneration of Homogeneous Turbulence — 961.
Teplov, I. B. A Possible Explanation of the Variation of the Differential Cross Section for the (p, α) and (α, p) Reactions in the Large Angle Region — 150.
—, I. S. Dmitriev, Ya. A. Teplova, and O. P. Shevchenko. Investigation of the Angular Distributions of α Particles from the $Li^7(p, \alpha)He^4$ Reaction — 243.
Teplova, Ya. A., V. S. Nikolaev, I. S. Dmitriev, and L. N. Fateeva. Slowing Down of Multicharged Ions in Solids and Gases — 31.
— (see Dmitriev, I. S.) — 11.
— (see Teplov, I. B.) — 243.
Ter-Akop'yan, G. M. (see Polikanov, S. M.) — 1016.
Tevikyan, R. V. Spectral Representations of Matrix Elements — 545.
Timerov, R. Kh. (see Garif'yanov, N. S.) — 791.
— (see Valiev, K. A.) — 415.
Timushev, G. F. (see Vasil'ev, S. S.) — 274.
Titeica, S. (see Hulubei, H.) — 210L.
Todorov, I. T. (see Logunov, A. A.) — 891.
Tokarevskiĭ, V. V. (see Nemets, O. F.) — 1028.
Tret'yakova, Ch. A. and V. Ya. Shestoperov. Calculation of Fluctuations of the Lateral Distribution of Extensive Atmospheric Shower Particles — 735.

Troĭnar, E. (see Batrakov, G. F.) — 810.
Trunin, R. F. (see Al'tshuler, L. V.) — 65.
Tsakadze, D. S. Determination of the Coefficient of Mutual Friction Between the Superfluid and Normal Components along Vortex Lines — 681.
Tsukerman, I. S. (see Lyagin, I. V.) — 1123.
— (see Solov'ev, V. V.) — 868.
Tsyganov, É. N. Proton-Proton Elastic Scattering at High Energies — 1009.
— (see Azimov, S. A.) — 299.
Tsytko, S. P. (see Antuf'ev, Yu. P.) — 268.
Tsytovich, V. N. Macroscopic Mass Renormalization and Energy Losses of Charged Particles in a Medium — 320.
— Energy Losses of Charged Particles in a Plasma — 561.
Tubaev, V. M. (see Pivovar, L. I.) — 1035.
Tulinov, A. F. (see Bednyakov, A. A.) — 515.
Turov, E. A. Conditions for the Existence of Weak Ferromagnetism and the Classification of Weakly Ferromagnetic Structures — 1098.
— The Phenomenon of Longitudinal Magnetization of an Antiferromagnet by a Transverse Circularly Polarized Magnetic Field — 981L.
Tverskoĭ, B. A. Propagation of One-Dimensional Self-Similar Plasma Waves Along a Magnetic Field — 581.
Tys, J. (see Volkov, V. V.) — 442L.
Urin, M. G. (see Zaretskiĭ, D. F.) — 211L.
Urlin, V. D. (see Kormer, S. B.) — 477.
Usacheva, N. F. (see Garif'yanov, N. S.) — 791.
Ushakov, V. (see Dolgoshein, B.) — 654.
Vaĭnshteĭn, L. A. (see Kapitza, S. P.) — 573.
Vaks, V. G., V. M. Galitskiĭ, and A. I. Larkin. Collective Excitations with Non-Zero Angular Momentum Pairing — 914.
Valiev, K. A. and R. Kh. Timerov. Theory of Nuclear Resonance in Paramagnetic Media. II. Spin-Lattice Relaxation — 415.
— and M. M. Zaripov. Effect of the Shape of Molecules on the Magnetic Relaxation Rate in Liquids — 353.
Val'ter, A. K. (see Antuf'ev, Yu. P.) — 268.
Vanyukov, M. P. (see Andrews, S. I.) — 214L.
Varfolomeev, A. A. (see Nikol'skiĭ, B. A.) — 631L.
Varfolomeev, A. T. Comparison of the Excitation Energies of B^{11} Produced in the Reactions $C^{12}(\pi^-, n)B^{11}$ and $C^{12}(p, 2p)B^{11}$ — 496.
— High Energy Fragments Emitted During the Absorption of Slow π^- Mesons by O^{16} Nuclei — 505.
Vasil'ev, S. S., E. A. Romanovskiĭ, and G. F. Timushev. Inelastic Scattering of 6.6-MeV Protons on Ca^{40} and Mn^{55} — 274.
— (see Baskova, K. A.) — 289.
Veksler, V. I. Interaction of Slow Positive Rubidium and Cesium Ions with the Surface of Molybdenum — 222.
Vernov, S. N., Li Don Hwa, B. A. Khrenov, and G. B. Khristiansen. Muon Beams in Extensive Air Showers — 528.
Volkov, V. V., L. Pomorski, J. Tys, and G. N. Flerov. Observation of Pick-Up of Three Neutrons and Stripping of Three Protons in Interactions Between N^{14} and Ne^{20} Ions with C, Al, Cu, and Ta Nuclei — 442L.
Volkov, Yu. M. and L. A. Kul'chitskiĭ. Photonuclear Reactions Involving the Emission of Deuterons and Tritons with Energies Below 15 MeV — 77.
—, A. V. Kulikov, and V. P. Chizhov. Excitation Functions for the (γ, d) and (γ, p) Reactions in B^{10} and Be^9 — 42.
Vovenko, A. S., L. B. Golovanov, B. A. Kulakov, A. L. Lyubimov, Yu. A. Matulenko, I. A. Savin, and E. V. Smirnov. Total π^-p Cross Sections at High Energies — 498.
Vystavkin, A. N. (see Lifshitz, T. M.) — 661.
Wang Jung (see Barashenkov, V. S.) — 154.
Wolf, J. and G. Domokos. On the Reaction $\pi^- + p \rightarrow \Lambda^0 + K^0$ — 605.
Yakovenko, V. M. (see Kaner, É. A.) — 330.
Yen Wu-kuang (see Alfimenkov, V. P.) — 713.
— (see Alfimenkov, V. P.) — 718.
Yuan Jung-fang (see Blokhintseva, T. D.) — 629L.
Yuldashev, A. A. (see Azimov, S. A.) — 299.
Yur'ev, B. A. (see Shevchenko, V. G.) — 492.
Yur'ev, V. G. (see Pikus, G. E.) — 225.
Zakhar'ev, B. V. (see Balashov, V. V.) — 951.
Zapevalov, V. A. (see Bogdankevich, O. V.) — 1044.
Zaretskiĭ, D. F. and V. M. Novikov. Excitation of Collective Nuclear Levels in Heavy μ-Mesic Atoms — 358.
— and M. G. Urin. Low-Lying Negative-Parity Levels in Nonspherical Nuclei — 211L.
Zaripov, M. M. (see Valiev, K. A.) — 353.
Zaslavskiĭ, G. M. and S. S. Moiseev. Some Peculiarities in the Behavior of a Relativistic Plasma with an Anisotropic Distribution of Electron Velocities — 731.
Zatsepin, V. I. and A. E. Chudakov. Lateral Distribution of the Intensity of Cerenkov Radiation from Extensive Air Showers — 1126.
Zel'dovich, Ya. B. The Collapse of a Small Mass in the General Theory of Relativity — 446L.
— Static Solutions with Energy Excess in the General Theory of Relativity — 1158.
Zelevinskiĭ, V. G. (see Belyaev, S. T.) — 1104.
Zharkov, G. F. The Magnetic Moment of Thin Superconducting Films — 968.
Zhdanov, V., Yu. Kagan, and A. Sazykin. Effect of Viscous Transfer of Momentum on Diffusion in a Gas Mixture — 596.
Zhirnov, V. A. Effective Cross Section for Photoionization of Lithium Ions — 758.
Zhukhovitskiĭ, E. M. (see Gershuni, G. Z.) — 775.
Zhukov, V. A. (see Blokhintseva, T. D.) — 629L.
Zombkovskii, S. M. (see Ainutdinov, M. S.) — 979L.
— (see Ainutdinov, M. S.) — 1038.
Zverev, G. M. and N. G. Petelina. Electron Paramagnetic Resonance of Co^{2+} Ions in Corundum — 820.
Zykov, V. S. (see Sumbaev, O. I.) — 82.
Zyryanov, P. S. (see Eleonskiĭ, V. M.) — 619.

Analytic Subject Index to Volume 15

References with L are Letters to the Editor. Items are listed under the following categories:

Cosmic Radiation
Crystalline State (Vibrations, Optical Properties, Structure)
Elementary Particle Interactions (Experiment)
Fermi Liquid
Fission, Nuclear
Gravitation
Helium, Liquid
Hydrodynamics
Ions, Ionization
Kinetic Theory of Gases
Magnetic Properties of Matter
Magnetic Resonance, Magnetic Relaxation
Magnetohydrodynamics
Metals (Electronic Properties, Elastic Properties)
Methods and Instruments
Multiple Production of Particles
Mu Mesons
Nuclear Reactions and Scattering at High Energy (Experiment)
Nuclear Reactions and Scattering at Medium and Low Energies (Experiment)
Nuclear Reactions, Disintegrations, Scattering (Theory)
Nuclear Reactions on Multiply Charged Ions
Nuclear Spectra (α, β, γ) (Experiment)
Nuclear Structure (Theory)
Photonuclear Reactions
Plasma (Theory)
Plasma, Gas-Discharge (Experiment)
Pressures, High
Quantum Electrodynamics
Quantum Field Theory, Theory of Strong Interactions
Quantum Mechanical Generators and Amplifiers
Quantum Mechanics (Various Problems)
Radiation, Electromagnetic
Scattering (General Theory)
Scattering and Absorption in Crystals
Scattering of Electrons and Gamma Quanta
Semiconductors
Sound Waves
Statistical Physics (General Problems)
Strange Particles
Superconductivity
Weak Interactions
X Rays

Cosmic Radiation

Calculation of Fluctuations of the Lateral Distribution of Extensive Atmospheric Shower Particles. Ch. A. Tret'yakova and V. Ya. Shestoperov — 735.
Calculation of the Polarization of Low-Energy Cosmic-Ray Muons. V. Berezinskiĭ and B. Dolgoshein — 749.
Composition of Nuclear-Active Particles with Momentum > 1.8 BeV/c in Cosmic Radiation at 3250 m Above Sea Level. I. A. V. Khrimyan, V. V. Avakyan, N. A. Nalbandyan, K. Sh. Egiyan, and M. P. Pleshko — 465.
Investigation of the Polarization of Cosmic-Ray μ^+ Mesons. A. I. Alikhanyan, T. L. Asatiani, É. M. Matevosyan, and R. O. Sharkhatunyan — 90.
Lateral Distribution of the Intensity of Cerenkov Radiation from Extensive Air Showers. V. I. Zatsepin and A. E. Chudakov — 1126.
Muon Beams in Extensive Air Showers. S. N. Vernov, Li Don Hwa, B. A. Khrenov, and G. B. Khristiansen — 528.
Polarization of High-Energy Cosmic-Ray Muons. V. S. Berezinskiĭ — 340.
Polarization of Low-Energy Cosmic Ray Muons at Sea Level. B. Dolgoshein, B. Luchkov, and V. Ushakov — 654.

Crystalline State (Vibrations, Optical Properties, Structure)

Deformation Field in an Isotropic Elastic Medium Containing Moving Dislocations. A. M. Kosevich — 108.
Electromagnetic Waves in a Medium Possessing a Continuous Energy Spectrum. III. V. S. Mashkevich — 97.
Kinetics of Ordering During Second-Order Phase Transitions. I. M. Lifshitz — 939.
Temperature Dependence of the Effect of Isotopic Composition on the Size of the Lattice Constant in Lithium. V. S. Kogan and V. I. Khotkevich — 632L.
The Equation of State of a Crystal at Zero Temperature. N. A. Dmitriev — 539.
The Temperature Dependence of the Isotope Effect in the Nickel Lattice. V. S. Kogan and A. S. Bulatov — 1041.

Elementary Particle Interactions (Experiment)

Data on the $\pi\pi$ Interaction Derived from Pion Production Reactions in πp Collisions. Ya. Ya. Shalamov and A. F. Grashin — 770.
Elastic Scattering of 7.2-BeV Negative Pions on Protons. M. S. Aĭnutdinov, S. M. Zombkovskiĭ, S. Ya. Nikitin, and Ya. M. Selektor — 1038.
Elastic Scattering of 2.8-BeV/c π Mesons on Hydrogen. L. P. Kotenko, E. P. Kuznetsov, G. I. Merzon, and Yu. B. Sharov — 800.
Measurement of the Spin Correlation Coefficient for pp Scattering at 660 MeV. V. I. Nikanorov, G. Peter, A. F. Pisarev, and Kh. Poze — 837.
Measurement of Total Cross Sections of (π^-p) Reactions at π^--Meson Energy of 340 MeV. T. D. Blokhintseva, V. G. Grebinnik, V. A. Zhukov, G. Libman, L. L. Nemenov, G. I. Selivanov, and Yuan Jung-fang — 629L.
Observation of Charge Exchange of Stopped π^- Mesons on Nuclei of Bound Hydrogen. A. F. Dunaĭtsev, V. I. Petrukhin, Yu. D. Prokoshin, and V. I. Rykalin — 1167L.
Probability of the $\pi^+ \to \pi^0 + e^+ + \nu$ and $\pi^+ \to \gamma + e^+ + \nu$ Decay. A. F. Dunaĭtsev, V. I. Petrukhin, Yu. D. Prokoshkin, and V. I. Rykalin — 985L.
Proton-Proton Elastic Scattering at High Energies. É. N. Tsyganov — 1009.

Proton-Proton Elastic Scattering at 2.8 BeV. S. A. Azimov, Do In Seb, L. F. Kirillova, É. M. Khabibullina, É. N. Tsyganov, M. G. Shafranova, B. A. Shakhbazyan, and A. A. Yuldashev — 299.

Search for the D^+ Meson. B. A. Nikol'skiĭ, L. V. Surkova, A. A. Varfolomeev, and M. M. Sulkovskaya — 631L.

Spin of the ρ Meson. A. F. Grashin and Ya. Ya. Shalamov — 787L.

The $\pi\pi$ Interaction in π^-p Collisions at 7.2 BeV. M. S. Ainutdinov, S. M. Zombkovskiĭ, S. Ya. Nikitin, Ya. M. Selektor, and A. F. Grashin — 979L.

Total Cross Section for Interaction Between Protons and 8.3-BeV Neutrons. L. Ozhdyani, V. S. Pantuev, M. N. Khachaturyan, and I. V. Chuvilo — 272.

Total π^-p Cross Sections at High Energies. A. S. Vovenko, L. B. Golovanov, B. A. Kulakov, A. L. Lyubimov, Yu. A. Matulenko, I. A. Savin, and E. V. Smirnov — 498.

Fermi Liquid

A Microscopic Theory of the Damping of Zero Sound in a Fermi Liquid. G. M. Éliashberg — 1151.

Collective Excitations with Non-Zero Angular Momentum Pairing. V. G. Vaks, V. M. Galitskiĭ, and A. I. Larkin — 914.

Fission, Nuclear

A Calculation of the Fission Threshold and Fragment Excitation Energies by Means of the Liquid Drop Model of the Nucleus with Inclusion of the Wigner Symmetry Energy. V. S. Stavinskiĭ and V. P. Kovalev — 1120.

A Study of the Energy and Angular Distributions of Neutrons Emitted in the Fission of U^{235} Induced by Thermal Neutrons. M. V. Blinov, N. M. Kazarinov, and A. N. Protopopov — 704.

Anisotropy and Energy Distribution of Th^{232} Fission Fragments. B. D. Kuz'minov, L. S. Kutsaeva, and I. I. Bondarenko — 75.

Equilibrium Shapes of Nuclei in the Quasistatic Fission Model. V. M. Strutinskiĭ — 1091.

Fission Barrier of a Rotating Nucleus. G. A. Pik-Pichak — 897.

Kinetic Energy of Fragments Emitted in the Fission of U^{238} Bombarded by 14.5-MeV Neutrons. V. N. Adamov, S. S. Kovalenko, and K. A. Petrzhak — 1024.

Nuclear Shells and Prompt Fission Neutrons. M. V. Blinov and V. P. Éismont — 129.

Spontaneous Fission with an Anomalously Short Period. I. S. M. Polikanov, V. A. Druin, V. A. Karnaukhov, V. L. Mikheev, A. A. Pleve, N. K. Skobelev, V. G. Subbotin, G. M. Ter-Akop'yan, and V. A. Fomichev — 1016.

Spontaneous Fission with an Anomalously Short Period. II. V. P. Perelygin, S. P. Almazova, B. A. Gvozdev, and Yu. T. Chuburkov — 1022.

Symmetry of Nuclear Fission. V. P. Éismont — 127.

Gravitation

Gravitational Radiation by a Relativistic Particle. V. I. Pustovoĭt and M. E. Gertsenshteĭn — 116.

Invariant Formulation of the Theory of the Gravitational Wave Field. Yu. B. Rumer — 402.

Static Solutions with Energy Excess in the General Theory of Relativity. Ya. B. Zel'dovich — 1158.

The Collapse of a Small Mass in the General Theory of Relativity. Ya. B. Zel'dovich — 446L.

Helium, Liquid

An Investigation of the Temperature Discontinuity at the Boundary Between a Solid and Superfluid Helium. Kuang Wey Yen — 635.

Determination of the Coefficient of Mutual Friction Between the Superfluid and Normal Components along Vortex Lines. D. S. Tsakadze — 681.

λ-Points of Concentrated He^3-He^4 Mixtures. B. N. Esel'son, V. G. Ivantsov, and A. D. Shvets — 651.

Singularities in the Equilibrium Diagram of a He^3-He^4 Solution at the λ-Point. D. G. Sanikidze — 922.

The Transition of Liquid He^3 Into the Superfluid State. L. P. Gor'kov and L. P. Pitaevskiĭ — 417.

Hydrodynamics

Application of Quantum Field Theory Methods to the Problem of Degeneration of Homogeneous Turbulence. V. I. Tatarskiĭ — 961.

Asymptotic Smoothing out of a Discontinuity in a Monatomic Gas. R. G. Barantsev — 615.

Ions, Ionization

Charge Exchange of Xe^{3+} and Xe^{4+} in Neon. G. N. Ogurtsov and I. P. Flaks — 502.

Effective Cross Section for Photoionization of Lithium Ions. V. A. Zhirnov — 758.

Electron Capture and Loss by Fast Hydrogen Atoms Passing Through Molecular Gases. D. V. Pilipenko and Ya. M. Fogel' — 646.

Electron Capture by Helium Ions in Various Gases in the 300—1500 keV Energy Range. L. I. Pivovar, M. T. Novikov, and V. M. Tubaev — 1035.

Electron Recombination in a Monatomic Gas. L. P. Pitaevskiĭ — 919.

Experimental Study of Electron Loss by Multiply Charged Ions in Gases. I. S. Dmitriev, V. S. Nikolaev, L. N. Fateeva, and Ya. A. Teplova — 11.

Interaction of Medium-Energy (10—100 keV) Atomic Particles with Solids (Energy Spectra of Secondary Ions). B. V. Panin — 215.

Interaction of Slow Positive Rubidium and Cesium Ions with the Surface of Molybdenum. V. I. Veksler — 222.

Ionization of Gases by Fast Hydrogen Atoms and by Protons. E. S. Solov'ev, R. N. Il'in, V. A. Oparin, and N. V. Fedorenko — 459.

Kinetics of Exothermic Reactions Between Molecules and Molecular Ions. O. B. Firsov — 906.

Resonance Charge Exchange in Atomic Hydrogen. Yu. E. Murakhver — 859.

Slowing Down of Multicharged Ions in Solids and Gases. Ya. A. Teplova, V. S. Nikolaev, I. S. Dmitriev, and L. N. Fateeva — 31.

Kinetic Theory of Gases

Effect of Viscous Transfer of Momentum on Diffusion in a Gas Mixture. V. Zhdanov, Yu. Kagan, and A. Sazykin — 596.

Magnetic Properties of Matter

Antiferromagnetism of Iron-Manganese Alloys. V. L. Sedov — 88.

Antiferromagnetism of Iron-Nickel Alloys. V. I. Chechernikov — 659.

Calculation of the Diamagnetic Susceptibility of Helium. R. Ya. Damburg and E. M. Iolin — 572.
Conditions for the Existence of Weak Ferromagnetism and the Classification of Weakly Ferromagnetic Structures. E. A. Turov — 1098.
Effects of Helicoidal Magnetic Structure on the Magnetostriction of Dysprosium. K. P. Belov and S. A. Nikitin — 279.
Ferroelectric Antiferromagnets. V. A. Bokov, I. E. Myl'nikova, and G. A. Smolenskiĭ — 447L.
'Helical' Antiferromagnetism of Gadolinium. K. P. Belov and A. V. Ped'ko — 62.
Magnetic Properties of the β-Modification of Uranium Hydride and Deuteride. A. I. Karchevskiĭ and E. M. Buryak — 260.
On the Magnetic Properties of Paramagnetic 'Fluids' of the Molecular Chain Type. V. L. Ginzburg and V. M. Faĭn — 131.
The Phenomenon of Longitudinal Magnetization of an Antiferromagnet by a Transverse Circularly Polarized Magnetic Field. E. A. Turov — 981L.

Magnetic Resonance, Magnetic Relaxation

A Quantum-Statistical Theory of Cross Relaxation. B. N. Provotorov — 611.
Effect of the Shape of Molecules on the Magnetic Relaxation Rate in Liquids. K. A. Valiev and M. M. Zaripov — 353.
Electron Paramagnetic Resonance in Dilute Vanadyl Chloride Solutions. N. S. Garif'yanov, B. M. Kozyrev, R. Kh. Timerov, and N. F. Usacheva — 971.
Electron Paramagnetic Resonance of Co^{2+} Ions in Corundum. G. M. Zverev and N. G. Petelina — 820.
Magneto-Acoustic Resonance in Aluminum. P. A. Bezuglyĭ, A. A. Galkin, A. I. Pushkin, and A. I. Khomchenko — 60.
Magnetooptical Resonance in Orderable Alloys and the Internal Crystal Field of a Ferromagnetic Metal. G. S. Krinchik and R. D. Nuralieva — 999.
NMR Line Structure of Cu^{63} and Cu^{65} Isotopes in β-Brass. S. I. Aksenov — 1165.
On the Theory of Spin-Lattice Relaxation in Paramagnetic Ionic Crystals. L. K. Aminov — 547.
Pulsed Excitation of a System of Weakly Interacting Particles. U. Kh. Kopvillem — 924.
Spin Diffusion and Magnetic Relaxation of Nuclei. G. R. Khutsishvili — 909.
Spin-Lattice Relaxation and Cross-Relaxation Interactions in Chromium Corundum. A. A. Manenkov and A. M. Prokhorov — 54.
Spin-Lattice Relaxation of Nuclei During Nuclear Resonance in Ferromagnetic Substances. L. L. Buishvili and N. P. Giorgadze — 350.
Spin-Spin Interaction via a Phonon Field in Paramagnetic Crystals. L. K. Akimov and B. I. Kochelaev — 903.
Temperature Dependence of Spin-Lattice Relaxation Times. A. A. Manenkov and A. M. Prokhorov — 951.
The Spin-Lattice Relaxation Time of the Ti^{3+} Ion in Corundum. L. S. Kornienko, P. P. Pashinin, and A. M. Prokhorov — 45.
Theory of Nuclear Resonance in Paramagnetic Media. II. Spin-Spin Relaxation. K. A. Valiev and R. Kh. Timerov — 415.

Magnetohydrodynamics

Convective Instability Spectrum of a Conducting Medium in a Magnetic Field. G. Z. Gershuni and E. M. Shukhovitskiĭ — 775.
Finite Amplitude Waves in Magnetohydrodynamics. Z. A. Gol'dberg — 179.
Propagation of One-Dimensional Self-Similar Plasma Waves Along a Magnetic Field. B. A. Tverskoĭ — 581.
Shock Wave Structure in a Dense High-Temperature Plasma. V. S. Imshennik — 167.

Metals (Electronic Properties, Elastic Properties)

A Method of Measuring the Momentum of Electrons in a Metal. V. F. Gantmakher — 982L.
Electrical Conductivity of Thin Samples and the Possibility of Determining the Mean Free Path of Electrons in Metals. M. Ya. Azbel' and R. N. Gurzhi — 1133.
Fermi Surface of Silver. N. E. Alekseevskiĭ and Yu. P. Gaĭdukov — 49.
Investigation of the Fermi Surface in Lead by the Method of Cyclotron Resonance. M. S. Khaĭkin and R. T. Mina — 24.
Investigation of the Fermi Surface in Tin by the Method of Cyclotron Resonance. M. S. Khaĭkin — 18.
Some Features in the Temperature Dependence of the Electrical Resistance of Ferromagnetic Metals at Low Temperatures. E. E. Semenenko and A. I. Sudovtsov — 708.
Temperature Dependence of the Electrical Resistance of Iron in the Range 0.38 — 4.2°K. E. E. Semenenko, A. I. Sudovtsov, and A. D. Shvets — 1033.
The Electrical Resistance of Cerium at Low Temperatures and High Pressures. E. S. Itskevich — 811.
Theory of the Spontaneous Hall Effect in Ferromagnets. Yu. P. Irkhin and V. G. Shavrov — 854.
Width of Cyclotron Resonance Line in Semimetals and Determination of the Correlation Function for Bismuth. M. Ya. Azbel' and G. A. Begiashvili — 445L.

Methods and Instruments

An Experimental Investigation of Electron Bunch Size During a Special Mode of Synchrotron Operation. O. F. Kulikov and P. B. Shoshin — 1013.
Determination of the Amplitudes of Betatron and Synchrotron Oscillations of Electrons by High-Speed Motion Picture Photography. A. G. Ershov — 422.
Radiation from Electron Bunches in a Microtron. S. P. Kapitza and L. A. Vaĭnshteĭn — 573.
Vertical Focusing in the Microtron. V. N. Melekhin — 433.

Multiple Production of Particles (see also Cosmic Radiation)

Analysis of 9 BeV Proton-Nucleon Interactions in Nuclear Emulsion. É. G. Boos, V. A. Botvin, N. P. Pavlova, Zh. S. Takibaev, and I. Ya. Chasnikov — 1.
On the Interpretation of the Two-Center Model Within the Framework of the Hydrodynamic Theory. A. A. Emel'yanov — 121.

Mu Mesons (see also Cosmic Radiation, Weak Interactions)

Electronic Activation of Mesic Atoms. A. E. Ignatenko, M. G. Petrashku, and D. Chultém — 449L.
Excitation of Collective Nuclear Levels in Heavy μ-Mesic Atoms. D. F. Zaretskiĭ and V. M. Novikov — 358.

Experimental Investigation of μ-Mesic Atom Processes in Gaseous Hydrogen. V. P. Dzhelepov, P. F. Ermolov, E. A. Kushnirenko, V. I. Moskalev, and S. S. Gershteĭn — 306.

Scattering of Neutrinos on Nucleons in the Model of the Anomalous Muon Interaction. V. B. Mandel'tsveĭg — 886.

Nuclear Reactions and Scattering at High Energy (Experiment)

Comparison of the Excitation Energies of B^{11} Produced in the Reactions $C^{12}(\pi^-, n)B^{11}$ and $C^{12}(p, 2p)B^{11}$. A. T. Varfolomeev — 496.

Cross Section for the Interaction Between Neutrons and Nuclei at 8.3 BeV. V. S. Pantuev and M. N. Khachaturyan — 626L.

Interaction Between 153-MeV Negative Pions and Helium. Yu. A. Budagov, P. F. Ermolov, E. A. Kushnirenko, and V. I. Moskalev — 824.

Investigation of Multiple Scattering of 100 — 200 keV Protons on Carbon. A. A. Bednyakov, A. N. Boyarkina, I. A. Savenko, and A. F. Tulinov — 515.

Investigation of the $Al^{27}(p, \pi^+)Mg^{27}$ Reaction. M. Ya. Kuznetsova, V. N. Pokrovskiĭ, and V. N. Rybakov — 1006.

Nuclear Reactions and Scattering at Medium and Low Energies (Experiment)

Elastic Scattering of Deuterons. III. Yu. V. Gofman and O. F. Nemets — 457.

Elastic Scattering of 5 — 15 MeV π^- Mesons on Carbon Nuclei. V. S. Demidov, V. G. Kirillov-Ugryumov, A. K. Ponosov, V. P. Protasov, and F. M. Sergeev — 1172L.

Energy Dependence of Cross Sections for (n, γ) Reactions on a Number of Odd-Z Nuclei. Yu. P. Popov and F. L. Shapiro — 683.

Gamma Ray Cascades in the $Rh^{103}(n, \gamma)Rh^{104}$ Reaction. L. F. Kalinkin, A. S. Melioranskiĭ, and I. V. Éstulin — 794.

Gamma Rays from Inelastic Scattering of 2.95-MeV Neutrons on Ta^{181}. L. Ya. Graudynya, O. I. Kostochkin, K. A. Petrzhak, and A. V. Sorokina — 240.

"Gross Structure" of Proton Spectra in Stripping Reactions. O. F. Nemets and V. V. Tokarevskiĭ — 1028.

High-Energy Fragments Emitted During the Absorption of Slow π^- Mesons by O^{16} Nuclei. A. T. Varfolomeev — 505.

Inelastic Scattering of Deuterons on Silicon, Titanium, and Iron Nuclei. Yu. V. Gofman and O. F. Nemets — 701.

Inelastic Scattering of 6.6-MeV Protons on Ca^{40} and Mn^{55}. S. S. Vasil'ev, E. A. Romanovskiĭ, and G. F. Timushev — 274.

Inelastic Scattering of 13.6-MeV Deuterons on Nickel Isotopes. Yu. V. Gofman, O. F. Nemets, and Yu. S. Stryuk — 454.

Investigation of the Angular Distributions of α Particles from the $Li^7(p, \alpha)He^4$ Reaction. I. B. Teplov, I. S. Dmitriev, Ya. A. Teplova, and O. P. Shevchenko — 243.

Resonances of the $Si^{29}(p, \gamma)P^{30}$ Reaction. Yu. P. Antuf'ev, A. K. Val'ter, A. N. L'vov, E. G. Kopanets, and S. P. Tsytko — 268.

Scattering of Low-Energy Protons by S^{32}. H. Hulubei, I. Neamu, I. Franz, N. Martalogu, N. Scintei, M. Ivascu, and A. Berinde — 993.

Total Cross Section of the T + T Reaction in the 60 — 1140 keV Energy Range. A. M. Govorov, Li Ka Yeng, G. M. Osetinskiĭ, V. I. Salatskiĭ, and I. V. Sizov — 266.

Nuclear Reactions, Disintegrations, Scattering (Theory)

A Possible Explanation of the Variation of the Differential Cross Section for the (p, α) and (α, p) Reactions in the Large Angle Region. I. B. Teplov — 150.

Decay of Hypernuclei. V. A. Lyul'ka — 1131.

Gamma Radiation from a Compound Nucleus with Large Angular Momentum. V. V. Babikov — 1143.

On a Possible Interpretation of Experiments on Inelastic Scattering of Fast Protons on Light Nuclei. L. Majling — 579.

Resonance Theory of Nuclear Recations Induced by Neutrons with Energies Below 5 MeV. I. V. Gordeev — 736.

Time for Formation of the Compound Nucleus and Gamma Radiation from Interacting Nuclei. V. V. Babikov — 861.

Nuclear Reactions on Multiply Charged Ions

Observation of Pick-Up of Three Neutrons and Stripping of Three Protons in Interactions Between N^{14} and Ne^{20} Ions with C, Al, Cu, and Ta Nuclei. V. V. Volkov, L. Pomorski, J. Tys, and G. N. Flerov — 442L.

Nuclear Spectra (α, β, γ) (Experiment)

Anomalous α Emitters in the Po — Ra Region. V. A. Karnaukhov — 671.

Coulomb Excitation of Second 2^+ Levels in Even-Even Medium Weight Nuclei. Yu. P. Gangrskiĭ and I. Kh. Lemberg — 711.

Deviations of the P^{32} β Spectrum from the Allowed Shape. Ch'ing Ch'eng-jui and L. S. Novikov — 252.

Fine Structure of Nuclear Masses Occurring in α Decay. V. N. Andreev — 630L.

Investigation of Some Radioactive Nuclei in the Region of the Filled $1f_{7/2}$ Shell. K. A. Baskova, S. S. Vasil'ev, No Seng-ch'ang, and L. Ya. Shavtvalov — 289.

New Short-Lived Isomers Nd^{140m}, Pm^{141m}, Eu^{146m}, and Gd^{158m}. V. V. Remaev, V. T. Gritsyna, and A. P. Klyucharev — 283.

Nuclear Matrix Elements in Beta Decay of La^{140}. A. A. Petushkov and I. V. Éstulin — 806.

The Contribution of Collective Motion to the Lifting of l-Forbiddenness. É. E. Berlovich, Yu. K. Gusev, V. V. Il'in, V. V. Nikitin, and M. K. Nikitin — 667.

Nuclear Structure (Theory)

"Anharmonic" Effects of Quadrupole Oscillations of Spherical Nuclei. S. T. Belyaev and V. G. Zelevinskiĭ — 1104.

Dipole Excitations on the Superfluid Model. V. V. Balashov, V. B. Belyaev, and B. V. Zakhar'ev — 947.

Finite Nuclear Size Corrections to the Isotope Shift. F. A. Babushkin — 1113.

Isotope Shift of Spectral Lines and the Compressibility of Deformed Nuclei. É. E. Fradkin — 550.

Low-Lying Negative-Parity Levels in Nonspherical Nuclei. D. F. Zaretskiĭ and M. G. Urin — 211L.

Motion of Individual Particles in Highly Deformed Nuclei. Liu Yüan and Ch'u Liang-yuan — 845.

Relation Between the Collective and Shell Descriptions of Dipole Excitations of Atomic Nuclei. V. V. Balashov — 191.
Single-Particle Levels in O^{17} and F^{17} Nuclei Under the Assumption of Strong Coupling of Nucleon and Tetrahedrally Symmetric Core. S. Matthies, V. G. Neudachin, and Yu. F. Smirnov — 411.
The Equilibrium Shape of Atomic Nuclei. V. G. Latysh — 543.
The Inclusion of Neutron-Proton Interaction in the Pair Correlation Model. B. L. Birbrair — 336.

Photonuclear Reactions

Direct Nuclear Photoeffect and the Optical Model of the Nucleus. Yu. V. Orlov — 175.
Elastic Photoproduction of π^0 Mesons on Carbon at 155 MeV. B. B. Govorkov, S. P. Denisov, and E. V. Minarik — 699.
Energy and Angular Distributions of Protons from the Reaction $Ca^{40}(\gamma, p)K^{39}$ at $E_{\gamma max} = 22$ MeV. T. N. Dragnev and B. P. Konstantinov — 236.
Excitation Functions for the (γ, d) and (γ, p) Reactions in B^{10} and Be^9. Yu. M. Volkov, A. V. Kulikov, and V. P. Chizhov — 42.
Giant Resonance in Photodisintegration of the Zr^{90} Nucleus. K. V. Shitikova — 603.
Investigation of the $He^4(\gamma, np)D^2$ Photonuclear Reaction. T. I. Kopaleĭshvili and R. I. Dzhibuti — 327.
Investigation of the $Li^7(\gamma, p)He^6$ Reaction. A. Kh. Shardanov and V. G. Shevchenko — 996.
Investigation of the Photoeffect in Light Nuclei. A. N. Gorbunov, V. A. Dubrovina, V. A. Osipova, V. S. Silaeva, and P. A. Cerenkov — 520.
Photonuclear Reactions Involving the Emission of Deuterons and Tritons with Energies Below 15 MeV. Yu. M. Volkov and L. A. Kul'chitskiĭ — 77.
Photoproduction of π^0 Mesons at High Energies. V. M. Arutyunyan — 768.
Photoprotons from Rh, Pt, and Pb. V. G. Shevchenko and B. A. Yur'ev — 492.
Splitting of the Giant Resonance in Medium-Heavy Nuclei. O. V. Bogdankevich, B. I. Goryachev, and V. A. Zapevalov — 1044.

Plasma (Theory) (see also Magnetohydrodynamics)

Collision Integral for Charged Particles in a Magnetic Field. V. M. Eleonskiĭ, P. S. Zyryanov, and V. P. Silin — 619.
Effect of Radiation on Electron Relaxation and Plasma Electrical Conductivity in a Strong Magnetic Field. A. I. Akhiezer, V. F. Aleksin, V. G. Bar'yakhtar, and S. V. Peletminskiĭ — 386.
Electric Microfield Distribution in an Ionized Gas. V. N. Alyamovskiĭ — 1067.
Energy Losses of Charged Particles in a Plasma. V. N. Tsytovich — 561.
Growth of Fluctuations in a Plasma with an Unstable Distribution Function. I. A. Akhiezer — 406.
Single-Particle Excitations in a Non-Degenerate Gas. E. K. Kudinov and S. T. Pavlov — 585.
Some Features of Collective Energy Losses of Fast Electrons Moving in an Anisotropic Plasma. I. O. Kulik — 380.
Some Peculiarities in the Behavior of a Relativistic Plasma with an Anisotropic Distribution of Electron Velocities. G. M. Zaslavskiĭ and S. S. Moiseev — 731.
The Nonlinear Theory of Interaction Between Charged Particle Beams and a Plasma in a Magnetic Field. V. D. Shapiro and V. I. Shevchenko — 1053.
Theory of Fluctuations of the Particle Distributions in a Plasma. Yu. L. Klimontovich and V. P. Silin — 199.

Plasma, Gas-Discharge (Experiment)

Application of Similitude Relations to Ignition of a Gas Discharge in Hydrogen. A. S. Pokrovskaya-Soboleva and B. N. Klyarfel'd — 297.
Excitation of Oscillations by Passage of a Slow Ion Beam Through a Plasma. M. D. Gabovich and G. S. Kirichenko — 1026.
Measurement of Electron Mobility According to the Variation of Plasma Resistance in a Magnetic Field. G. E. Pikus, N. S. Skvortsov, and V. G. Yur'ev — 225.
On the Remarks of S. I. Andreev and M. P. Vanyukov Concerning the Paper "Expansion of the Channel in Intense Miniature Sparks." B. A. Demidov, Yu. F. Skachkov, and S. D. Fanchenko — 989L.
Plasma Instability in a Toroidal Discharge Excited by a Traveling Electromagnetic Wave. R. A. Demirkhanov, N. I. Leont'ev, I. A. Kosyĭ, and T. M. Filatova — 231.
Remarks on the Paper by Demidov, Skachkov, and Fanchenko entitled "Channel Expansion in Intense Small Sparks." S. I. Andreev and M. P. Vanyukov — 214L.

Pressures, High

Dynamic Compression of Porous Metals and the Equation of State with Variable Specific Heat at High Temperatures. S. B. Kormer, A. I. Funtikov, V. D. Urlin, and A. N. Kolesnikova — 477.
Kinetics of Neutronization at Ultra-High Density. D. A. Frank-Kamenetskiĭ — 607.
Shock Adiabats and Zero Isotherms of Seven Metals at High Pressures. L. V. Al'tshuler, A. A. Bakanova, and R. F. Trunin — 65.
Shock Compression of Porous Tungsten. K. K. Krupnikov, M. I. Brashnik, and V. P. Krupnikova — 470.

Quantum Electrodynamics

Covariant Expansion of the Electromagnetic Field. V. L. Lyuboshitz and Ya. A. Smorodinskiĭ — 589.
Macroscopic Mass Renormalization and Energy Losses of Charged Particles in a Medium. V. N. Tsytovich — 320.
On Deceleration of Antiprotons in Matter. Yu. D. Fiveĭskiĭ — 558.
Photoproduction of Pairs of Charged Vector Mesons in the Coulomb Field of a Nucleus. I. V. Lyagin and I. S. Tsukerman — 1123.
Production of Charged Vector Bosons (X Mesons) by Leptons in the Coulomb Field of Nuclei. V. V. Solov'ev and I. S. Tsukerman — 868.

Quantum Field Theory, Theory of Strong Interactions

Analytic Continuation of the Three-Particle Unitarity Condition. Simplest Diagrams. V. N. Gribov and I. T. Dyatlov — 140.
Analytic Properties of the Bound State Wave Function for a Superposition of Yukawa Potentials. M. A. Braun — 764.
Analytic Properties of Nonrelativistic Graphs. L. D. Blokhintsev, É. I. Dolinskiĭ, and V. S. Popov — 1136.

Analytic Properties of the Partial Wave Amplitudes and the Asymptotic Behavior of the Scattering Amplitudes. V. N. Gribov — 873.
Behavior of the Real Part of the Scattering Amplitude at Very High Energies. P. Suranyi — 988L.
Certain Resonance Solutions of Low Energy Pion-Pion Scattering Equations. V. V. Serebryakov and D. V. Shirkov — 425.
Choice of Invariant Variables for the "Many-Point" Functions. V. E. Asribekov — 394.
Clothed Operators and the Commutativity Condition. V. P. Gachok — 849.
Complex Angular Momenta and the Relation between the Cross Sections of Various Processes at High Energies. V. N. Gribov and I. Ya. Pomeranchuk — 788L.
Contribution of Three-Particle States to the Equation for the Spectral Functions. V. N. Gribov and I. T. Dyatlov — 879.
Contribution to the Theory of the $\pi + N \rightarrow N + \pi + \pi$ and $\gamma + N \rightarrow N + \pi + \pi$ Reactions Near Threshold. V. V. Anisovich, A. A. Ansel'm, and V. N. Gribov — 159.
Estimates of the Effective Interaction Radius of Particles. M. I. Shirokov — 123.
Generalization of Symanzik's Theorem on the Majorization of Feynman Graphs. A. A. Logunov, I. T. Todorov, and N. A. Chernikov — 891.
High-Energy Behavior of the Elastic Pion-Pion Scattering Amplitude. G. Domokos — 377.
Higher Partial Waves in Low-Energy $\pi\pi$ Scattering. A. V. Efremov and D. V. Shirkov — 932.
Inelastic Pion-Nucleon Interactions at High Energies. V. S. Barashenkov, D. I. Blokhintsev, Wang Jung, É. K. Mikhul, Huang Tsu-chan, and Hu Shih-k'e — 154.
Location of Singularities of Feynman Diagrams. A. Z. Patashinskiĭ — 567.
On a Phenomenological Description of the Pion-Pion Interaction. L. D. Solov'ev and Ch'en Ts'ung-mo — 369.
On the Interference Between the Amplitudes of Inelastic Processes. I. I. Roĭzen and D. S. Chernavskiĭ — 435.
Polarization and Charge Exchange in High-Energy πp Scattering. I. I. Levintov — 137.
Properties of the Solution of the Low Equation for a Model of a Local Field Theory. B. M. Barbashov and G. V. Efimov — 365.
Some Consequences of the Moving-Pole Hypothesis for Processes at High Energies. V. N. Gribov, B. L. Ioffe, I. Ya. Pomeranchuk, and A. P. Rudik — 984L.
Spectral Representations of Matrix Elements. R. V. Tevikyan — 545.
Spin Structure of the Meson-Nucleon and Nucleon-Nucleon Scattering Amplitudes at High Energies. V. N. Gribov and I. Ya. Pomeranchuk — 1168L.
The Effect of the $\pi\pi$ Interaction on the Electromagnetic Form Factor of the Nucleon. A. F. Grashin and V. N. Mel'nikov — 973.
The Kemmer Scalar Symmetric Model. G. V. Efimov — 1082.
The Role of the Bipion in Single Pion Production in Nucleon-Nucleon Collisions. L. L. Nemenov, L. D. Solov'ev, and D. I. Khomskiĭ, — 889.

Quantum Mechanical Generators and Amplifiers
Interaction Between Laser Emission and Oscillating Surfaces. G. A. Askar'yan — 1161L.
Measurement of Maser Line Width. A. I. Chikin — 451.
On the Theory of Nonradiative Transitions in Luminescent Ionic Crystals. B. Z. Malkin — 977L.
Radiation of Molecules Under Resonant Conditions. G. M. Strakhovskiĭ and V. M. Tatarenkov — 625L.

Quantum Mechanics (Various Problems)
Criticism of an Attempt to Disprove the Uncertainty Relation between Time and Energy. V. A. Fock — 784.

Radiation, Electromagnetic
Cerenkov Radiation and Transition Radiation from Electromagnetic Waves. G. A. Askar'yan — 943.
Effects of the Gradient of a Strong Electromagnetic Beam on Electrons and Atoms. G. A. Askar'yan — 1088.
Emission from Molecules in a Mixed Energy State. N. G. Basov and A. N. Oraevskiĭ — 1062.
Experimental Investigation of Stimulated Emission from a Gas Mixture. V. K. Ablekov — 513.
On the Theory of Transition Radiation. É. A. Kaner and V. M. Yakovenko — 330.

Scattering (General Theory)
Elastic Scattering of High-Energy Pions and Nucleons. D. I. Blokhintsev — 610.
Exclusion of Divergences From the Scattering Matrix. D. A. Slavnov — 1072.
Invariant Parametrization of the Relativistic Scattering Matrix. A. A. Cheshkov and Yu. M. Shirokov — 103.
Reconstruction of the Scattering Matrix near Threshold. A. I. Baz', L. D. Puzikov, and Ya. Smorodinskiĭ — 865.
Theory of Resonance Scattering by Atomic Systems. I. Derivation of General Formulas. M. V. Kazarnovskiĭ and A. V. Stepanov — 343.

Scattering and Absorption in Crystals
Energy Spectrum of Resonance Absorption in Zinc Oxide of the 92-keV γ Radiation From Zn^{67}. V. P. Alfimenkov, Yu. M. Ostanevich, T. Ruskov, A. V. Strelkov, F. L. Shapiro, and Yen Wu-kuang — 713.
Inelastic Scattering of Slow Neutrons in Arbitrary Crystals and the General Problem of Reconstructing the Phonon Spectrum. Yu. Kagan — 954.
Magnetic Moment of the 23.8-keV Excited State of Sn^{119}. V. A. Bryukhanov, N. N. Delyagin, and V. S. Shpinel' — 818.
Observation of the Mössbauer Effect in a Tin-Containing Polymer. V. A. Bryukhanov, V. I. Gol'danskiĭ, N. N. Delyagin, E. F. Makarov, and V. S. Shpinel' — 443L.
Observation of the Mössbauer Effect in $Sm_2^{149}O_3$. V. P. Alfimenkov, Yu. M. Ostanevich, T. Ruskov, A. V. Strelkov, F. L. Shapiro, and Yen Wu-kuang — 718.
Phonon Scattering on Impurity Ions in Sodium-Chloride Crystals. E. D. Devyatkova, M. I. Kornfel'd, and I. A. Smirnov — 212L.
Resonance Scattering of Gamma Quanta in Te^{125}. Pham Zuy Hien, V. G. Shapiro, and V. S. Shpinel' — 489.
Scattering of Polarized Neutrons by a Helicoidal Magnetic Structure. Yu. A. Izyumov — 1162L.
The Mössbauer Effect for an Impurity Nucleus in a Crystal. I. Yu. Kagan and Ya. A. Iosilevskiĭ — 182.
The Mössbauer Effect on Tungsten Isotopes. O. I. Sumbaev, A. I. Smirnov, and V. S. Zykov — 82.

Scattering of Electrons and Gamma Quanta

Angular Distribution of Photoelectrons Knocked Out by Cs^{137} Photons from Targets with Different Z. A. A. Rimskiĭ-Korsakov and V. V. Smirnov — 47.

Inelastic Scattering of Photons in the Coulomb Field of a Nucleus. S. S. Sannikov — 196.

Scattering of High Energy Electrons on Electrons and the Dipole Structure of the Electron. É. M. Epshteĭn — 762.

The Effective Cross Section for Elastic Scattering of Slow Electrons by Hydrogen Atoms. V. N. Kolesnikov and V. V. Obukhov-Denisov — 692.

The Proton Compton Effect in the Dipole Approximation. V. K. Fedyanin — 720.

Semiconductors

Some Phenomena Occurring in n-Type Indium Antimonide Exposed to High Frequency Radiation. T. M. Lifshitz, Sh. M. Kogan, A. N. Vystavkin, and P. G. Mel'nik — 661.

Theory of Nonlinear Galvanomagnetic Phenomena in Semiconductors. R. F. Kazarinov and V. G. Skobov — 726.

Sound Waves

Excitation of Hypersound in Quartz. E. M. Ganapol'skiĭ and A. N. Chernets — 8.

On the Possibility of Amplification of Ultrasound in Semiconductors in an Electric Field. R. F. Kazarinov and V. G. Skobov — 628L.

Statistical Physics (General Problems)

A Diagram Technique for Evaluating Transport Coefficients in Statistical Physics at Finite Temperatures. I E. Dzyaloshinskiĭ — 778.

Quantum Theory of Relaxation Process. V. M. Faĭn — 743.

Strange Particles

An Experimental Investigation of Some Consequences of CP-Invariance in K_2^0-Meson Decays. M. Kh. Anikina, D. V. Neagu, É. O. Okonov, N. I. Petrov, A. M. Rozanova, and V. A. Rusakov — 93.

Concerning One Possibility of Determining the Magnetic Moments of Unstable Vector Particles. A. M. Baldin and Nguen Wan Hieu — 624L.

Concerning the Gravitational Masses of K^0 and $\overline{K^0}$ Mesons. É. O. Okonov, M. I. Podgoretskiĭ, and O. A. Khrustalev — 537.

Elastic Scattering of Λ Hyperons and K_1^0 Mesons on Hydrogen. B. A. Arbuzov, E. N. Kladnitskaya, V. N. Penev, and R. N. Faustov — 676.

Experimental Data on the Existence of a Resonance in the $K^0\Lambda$ System at an Energy of 1650 MeV. E. V. Kuznetsov, E. P. Kuznetsov, Ya. Ya. Shalamov, and A. F. Grashin — 1163L.

Limits for the Possible Magnetic Moment of the K^0 Meson. É. O. Okonov — 1079.

Neutral Baryon Currents and Single Production of Hyperons. M. A. Markov and Nguyen Wan Hieu — 190.

New Particles and the Sakata Model. I. Yu. Kobzarev and L. B. Okun' — 1146.

On the Reaction $\pi^- + p \rightarrow \Lambda^0 + K^0$. J. Wolf and G. Domokos — 605.

Production of Hyperons in Lead by K_2^0 Mesons with a Mean Energy of ~100 MeV. D. V. Neagu, É. O. Okonov, N. I. Petrov, A. M. Rozanova, and V. A. Rusakov — 303.

Superconductivity

A Method for Preparing the Superconducting Compound Nb_3Sn. F. K. Lange — 29.

Anisotropy of Absorption of Ultrasound in Superconductors. I. A. Privorotskiĭ — 315.

Concerning the Measurement of the Surface Tension Between Superconducting and Normal Phases. G. F. Batrakov, O. R. Mis'kevich, and É. Troĭnar — 810.

Magnetic Flux Quantization in a Superconducting Cylinder. V. L. Ginzburg — 207.

Magnetic Moment of Superconducting Tin Films. B. K. Sevast'yanov and V. A. Sokolina — 840.

Spin-Orbit Interaction and the Knight Shift in Superconductors. A. A. Abrikosov and L. P. Gor'kov — 752.

The Magnetic Moment of Thin Superconducting Films. G. F. Zharkov — 968.

Weak Interactions

A Search for the $\mu^+ \rightarrow e^+ + e^+ + e^-$ Decay. A. I. Babaev, M. Ya. Balats, V. S. Kaftanov, L. G. Landsberg, V. A. Lyubimov, and Yu. V. Obukhov — 1170.

Angular Distribution of Decay Products of Intermediate Vector Mesons Produced in the Process $e^+ + e^- \rightarrow B^+ + B^-$. Nguen Wan Hieu — 1118.

Angular Distribution of Muons from the π-μ Decay. H. Hulubei, J. Ausländer, E. Friedländer, and S. Titeica — 210L.

$\beta\gamma$ Correlation in β Decays of Mn^{56} and F^{20}. V. M. Lobashov and V. A. Nazarenko — 257.

Experimental Estimate of Probability of β Decay of the π^+ Meson. A. F. Dunaĭtsev, V. I. Petrukhin, Yu. D. Prokoshkin, and V. I. Rykalin — 439L.

Experimental Investigation of the Structure of the Vector Current in Weak Interactions. Nguyen Wan Hieu — 1116.

Further Search for the $\mu \rightarrow e + \gamma$ Decay. A. I. Alikhanov, A. I. Babaev, M. Ya. Balats, V. S. Kaftanov, L. G. Landsberg, V. A. Lyubimov, and Yu. V. Obukhov — 438L.

Investigation of the Dependence of the $\beta\gamma$ Correlation on the Electron Velocity in the β Decay of Co^{60} and Au^{198}. V. M. Lobashov and V. A. Nazarenko — 247.

Unitary Symmetry and the Universal Weak Interaction. I. Yu. Kobzarev and L. B. Okun' — 970.

Violation of the $\Delta Q = \Delta S$ Rule in Leptonic Decays of K Mesons and the High-Energy Behavior of Weak Interactions. B. L. Ioffe — 978L.

X-Rays

Determination of Fluorescence Yield by Measuring the X-Ray Photoelectric Effect in a Massive Cathode. M. A. Rumsh and V. N. Shchemelev — 507.